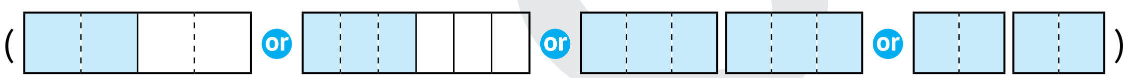
# General Revision

## First Choose the correct answer:

1. The tape diagram representing the division process " $\frac{1}{2} \div 2$ " is ..........



2. The reciprocal of $\frac{2}{7}$ is .......... ( 2 or $\frac{7}{2}$ or 7 or $\frac{2}{7}$ )

3. 7.1 × 0.3 = .......... ( 0.213 or 2.13 or 21.3 or 213 )

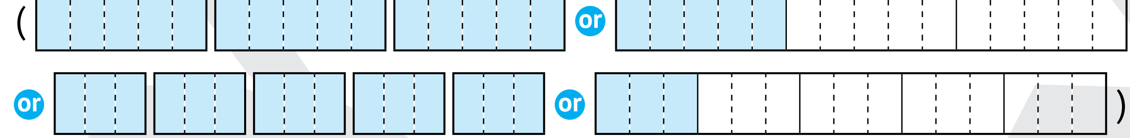
4. 35 : 20 = .......... : .......... ( 5 : 4 or 4 : 7 or 5 : 7 or 7 : 4 )

5. If $\frac{3}{7} = \frac{12}{x}$, then $x$ = .......... ( 49 or 14 or 21 or 28 )

6. If Othman has **45** LE and Ismail has **54** LE, then the ratio of what Ismail has to Othman is .......... : .......... ( 5 : 6 or 6 : 5 or 9 : 2 or 7 : 9 )

7. 5.3 pounds = .......... piasters ( 5,300 or 530 or 53 or 5.3 )

8. The tape diagram representing the division process " $5 \div \frac{1}{3}$ " is ..........



9. The reciprocal of **9** is .......... ( 1 or $\frac{1}{9}$ or 19 or 9 )

10. $\frac{3}{6} \div$ .......... = 1 ( 2 or $\frac{1}{2}$ or 6 or $\frac{6}{3}$ )

11. 63 ÷ 0.7 = .......... ÷ 7 ( 0.63 or 630 or 63 or 6.3 )

12. Which ratio of the following equals to $\frac{1}{5}$ ? ( $\frac{6}{12}$ or $\frac{4}{20}$ or $\frac{5}{15}$ or $\frac{5}{20}$ )

13. 24 : 48 = .......... : .......... ( 6 : 18 or 5 : 4 or 1 : 2 or 3 : 5 )

14. 2 $a$ = 7 $b$ then $b$ : $a$ = .......... : .......... ( 2 : 7 or 7 : 2 or 2 : 9 or 9 : 2 )

15 The ratio of two numbers is 1 : 4. If the first number is 7, then the second number is ...................... . ( 28 or 14 or 20 or 16)

16 If 8 : $x$ − 1 = 6 : 12, then the value of $x$ = ...................... ( 17 or 8 or 15 or 7)

17 The division operation represented by the following tape diagram is ...................... .

( $\frac{2}{3} \div 2$ or $\frac{2}{3} \div 3$ or $\frac{2}{3} \div 4$ or $\frac{2}{3} \div \frac{1}{2}$ )

18 ................ ÷ ................ = $\frac{4}{7} \times \frac{5}{4}$ ( $\frac{7}{4} \div \frac{5}{4}$ or $\frac{7}{4} \div \frac{4}{5}$ or $\frac{4}{7} \div \frac{5}{4}$ or $\frac{4}{7} \div \frac{4}{5}$ )

19 Which ratio of the following equals a third?

( $\frac{4}{16}$ or $\frac{5}{20}$ or $\frac{7}{28}$ or $\frac{10}{30}$ )

20 175 : 125 = ...................... : ...................... ( 5 : 3 or 5 : 4 or 2 : 3 or 7 : 5 )

21 If 1 : $x$ = 0.8, then $x$ = ...................... . ( 2 or 8 or 5 or $1\frac{1}{4}$ )

22 2.3 tons ...................... 2,300 kg ( > or < or = or otherwise )

23 The division operation represented by the following tape diagram is ......................

( $3 \div \frac{1}{2}$ or $3 \div \frac{1}{3}$ or $3 \div \frac{1}{4}$ or $2 \div \frac{2}{3}$ )

24 Any number multiplied by its reciprocal equals ......................

(0 or 1 or the same number or twice the number)

25 $\frac{3}{5}$ is equivalent to ...................... . ( $\frac{7}{15}$ or $\frac{15}{14}$ or $\frac{15}{25}$ or $\frac{35}{25}$ )

26 If an amount of food is distributed between two people in the ratio 4:3, then what the first person took = ................ the total. ( $\frac{3}{4}$ or $\frac{3}{7}$ or $\frac{4}{7}$ or $\frac{4}{3}$ )

27 The ratio between the perimeter of a square to its side length is ...................... : ...................... ( 4 : 1 or 1 : 3 or 3 : 1 or 1 : 4)

28 2 : 9 is equivalent to ...................... . ( 9 : 2 or 18:81 or 18:4 or 20:45)

29. If 3 : 5 = 12 : 4 $x$, then $x$ = .................... . ( 20 or 24 or 5 or 10 )

30. The number .................... is a reciprocal of itself. ( 0 , 2 , 1 , $\frac{1}{2}$ )

31. $\frac{2}{5}$ .................... the reciprocal of 5 ( < or = or > or ≤ )

32. Which ratio of the following is in the simplest form?

( $\frac{3}{12}$ or $\frac{7}{21}$ or $\frac{9}{17}$ or $\frac{5}{30}$ )

33. The ratio 9 : 12 in the simplest form equals .................... .

( $\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{3}{4}$ or $\frac{2}{3}$ )

34. .................... are equivalent ratios.

( $\frac{2}{6}$ , $\frac{9}{18}$ or $\frac{12}{15}$ , $\frac{16}{20}$ or $\frac{6}{7}$ , $\frac{12}{21}$ or $\frac{2}{3}$ , $\frac{5}{10}$ )

35. 5 : $x$ = 0.2, then $x$ = .................... . ( 5 or 10 or 25 or 0.5)

36. $\frac{3}{4}$ × .................... = 1 ( 0 or 1 or $\frac{4}{3}$ or $\frac{3}{4}$ )

37. The reciprocal of the number .............. is $1\frac{2}{3}$ . ( $2\frac{1}{3}$ or $1\frac{3}{2}$ or $\frac{3}{5}$ or $\frac{5}{2}$ )

38. The ratio between the perimeter of an equilateral triangle and its side length = .................... . ( 1 : 4 or 4 : 1 or 1 : 3 or 3 : 1 )

39. If $x$ : 15 = 1 : 3, then $x$ + 3 = .................... ( 5 or 8 or 9 or 11)

40. $\frac{2}{3} \div \frac{1}{5}$ = .................... ( $\frac{2}{3} \times 5$ or $\frac{3}{2} \times 5$ or $\frac{3}{2} \times \frac{1}{5}$ or $\frac{2}{3} \times \frac{1}{5}$ )

41. .................... $\div \frac{1}{4} = \frac{1}{3}$ ( $\frac{3}{4}$ or $\frac{1}{12}$ or 12 or $\frac{4}{3}$ )

42. $\frac{14}{15}$ and $\frac{3}{4}$ are .................... . ( equivalent ratios or not equivalent ratios)

43. The ratio between two number is 3 : 5. If the first number is 9 then the second number is .................... . ( 8 or 10 or 15 or 20 )

44. If 3 $x$ = 4 $y$ then $x$ : $y$ = ............... : ............... . ( 3 : 4 or 3: 7 or 7 : 4 or 4 : 3 )

## Second Complete the following:

1. The opposite figure represents .................... ÷ ....................



2. The reciprocal of 6 is .................... .

3. $\frac{7}{13} \div$ .................... $= 1$

4. $0.02 \times 0.03 =$ ....................

5. $\frac{4}{15} \div \frac{2}{3} =$ .................... × ....................

6. The ratio between 360 to 540 is .................... : ....................

7. If $\frac{A}{B} = \frac{C}{D}$, then **A** x **D** = .................... .

8. $\frac{2}{6} = \frac{3}{\ldots\ldots} = \frac{\ldots\ldots}{12} = \frac{5}{\ldots\ldots} = \frac{\ldots\ldots}{30}$

9. A cyclist covers **8** km in **2** minutes, then he will cover .................... km in **5** minutes.

10. The reciprocal of $1\frac{3}{5}$ is .................... .

11. 5 ÷ .................... = 5 × 2

12. .................... ÷ 3.5 = 1,200 ÷ 35

13. .................... $\div 4 = \frac{3}{8}$

14. The ratio between two numbers is 4 : 8. The first number is **18**, then the second number is .................... .

15. If a printer prints **27** papers in **3** minutes, then it prints .................... papers in **8** minutes.

16. $\frac{7}{5} \div \frac{1}{5} =$ ....................

17. The reciprocal of the number .................... is $3\frac{3}{5}$.

18. $1\frac{3}{4} \div$ .................... $= 4$

19. If $4 : 7 = x : 35$, then $x - 3 =$ ....................

20. $x + \frac{3}{14} = \frac{1}{2}$, then $x =$ ....................

21. The number which has no reciprocal is ....................

22. $4.2 \div 0.07 =$ .................... $\div 7$

23. $5.7 \times$ .................... $= 570$

24. The ratio between two sides in the same square is .................... : ....................

25. If $53 \times 31 = 1{,}643$, then $16.43 \div 3.1 =$ ....................

26. The opposite figure represents .......... ÷ ..........

27. $6 \div \frac{5}{7} =$ .................... × ....................

28. In the ratio 5 : 7, the first term is ............ and the second term is ............

29. $\frac{2}{x}$ and $\frac{8}{20}$ are equivalent ratios, then $x =$ ....................

30. If $25 \times 33 = 825$, then $2.5 \times 3.3 =$ ....................

31. .................... $\div 0.8 = 2.3$

32. If $2 : x = 16 : 24$, then $3x =$ ....................

33. The number A is twice the number B then **B : A** = .................... : ....................

## Third Essay questions:

1. Kareem has $\frac{3}{4}$ meters of pipe, and he wants to divide it into **15** pieces of equal length to make models of small robots. What is the length of each piece of pipe that Kareem will use in each robot ?

   ..............................................................................................................

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2. Mazen bought **6** pizza pies, and divided them among his friends, each of whom got $\frac{3}{4}$ of the pie. How many friends does Mazen have?

   ..............................................................................................................

   ..............................................................................................................

3. Kenzy bought $\frac{8}{9}$ kg of apples and divided them equally among her children. If each child took $\frac{2}{9}$ kg of apples, how many children does she have?

   ..............................................................................................................

   ..............................................................................................................

4. Nada distributed **6** cake moulds to a group of children, and each child got $\frac{2}{3}$ cake. How many children did Nada distribute cake among?

   ..............................................................................................................

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5. Sara bought 9 meters of fabric; she paid 521.1 pounds. What is the price of each meter of fabric?

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6. Mark bought 5 notebooks for 4.75 LE each and 6 pens for 3.75 LE each. Calculate the money Mark paid.

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7. Amr bought 24 boxes of juice; the price of each one is 7.5 pounds. How many pounds did he pay the seller?

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.................................................................................................................................

8. An orange export company puts 25 oranges in one box.

**Answer the following:**

a. The number of oranges in 10 boxes = ....................

b. The number of boxes which enough to contain 225 oranges = ....................

9. Murad uploads videos into YouTube. If each video takes 12 minutes,

a. How many videos will be uploaded in 288 minutes?

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.................................................................................................................................

b. How long Murad will take to upload 7 videos into YouTube?

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.................................................................................................................................

10 From the following double number line, find the value of $x$ and $y$.

| **Students** | 0 | $x$ | 24 | 40 | |
|---|---|---|---|---|---|
| **Tables** | 0 | 1 | 6 | $y$ | |

11 Laine reads **36** pages in **40** minutes, and Omar reads **56** pages in **64** minutes, are they reading in equivalent ratios? Explain your answer.

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.................................................................................................................................

12 Ashraf wants to plant trees, it takes him **30** minutes to plant a tree. Use a double number line to find:

a How many trees do he plant in **2** hours?

b How long will it take him to plant **7** trees?

**Minutes**

**Trees**

13 Mona bought **5** kg of strawberries, she paid **15** LE. How much money does she pay to buy **7** kg?

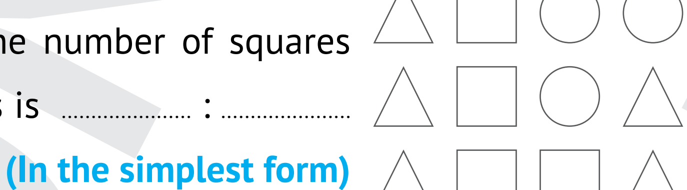
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14 In the following figure, the ratio between the number of circles to the number of squares is .................... : .................... ,

while the ratio between the number of squares to the number of all shapes is .................... : ....................

**(In the simplest form)**



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# Model Exams

## Model 1

### First Choose the correct answer:

1. The tape diagram representing the division process "$\frac{1}{2} \div 2$" is ..................
( [tape diagram] or [tape diagram] or [tape diagram] or [tape diagram] )

2. 5.3 pounds = .................. piasters ( 5300 or 530 or 53 or 5.3 )

3. 36 : 72 = .................. : .................. ( 6 : 18 or 5 : 4 or 1 : 2 or 3 : 5 )

4. The ratio between the perimeter of a square to its side length is
.................. : .................. ( 4 : 1 or 1 : 3 or 3 : 1 or 1 : 4)

### Second Complete the following:

1. $\frac{5}{12} \div$ .................. $= 1$

2. The ratio between two numbers is 4 : 8. If the first number is 18, then the second number is ...................

3. $2\frac{2}{5} \div$ .................. $= 3$

4. If $25 \times 33 = 825$, then $2.5 \times 0.33 =$ ...................

### Third Essay question:

Abdullah bought 4 pizza pies, and divided them among his friends, each of whom got $\frac{4}{5}$ of the pie. How many friends does Abdullah have?

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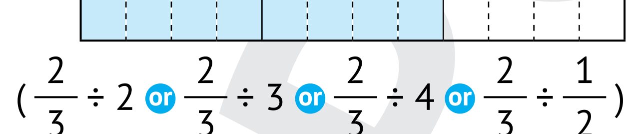
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# Model 2

## First Choose the correct answer:

1. The reciprocal of $\frac{5}{3}$ is .................... . ( $5$ or $\frac{3}{5}$ or $3$ or $\frac{5}{3}$ )

2. The division operation represented by the following tape diagram is .................... .



( $\frac{2}{3} \div 2$ or $\frac{2}{3} \div 3$ or $\frac{2}{3} \div 4$ or $\frac{2}{3} \div \frac{1}{2}$ )

3. Which ratio of the following is in the simplest form?

( $\frac{3}{13}$ or $\frac{7}{21}$ or $\frac{9}{18}$ or $\frac{5}{30}$ )

4. If $3x = 4y$ then $y : x$ = .................. : .................. ( 3 : 4 or 3 : 7 or 7 : 4 or 4 : 3 )

## Second Complete the following:

1. $0.2 \times 0.03$ = ....................

2. If a printer prints **27** papers in **3** minutes, then it prints .................... papers in **8** minutes.

3. In the ratio 5 : 7, the first term is ............... and the second term is .............. .

4. If $2 : x = 16 : 24$, then $3x$ = ....................

## Third Essay question:

Kamal has $\frac{9}{10}$ meters of pipe, and you want to divide it into **6** pieces of equal length to make models of small robots. What is the length of each piece of pipe that Kamal will use in each robot?

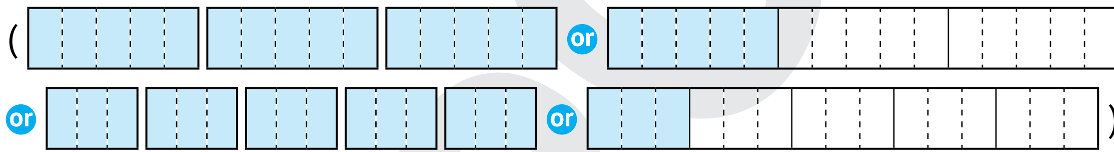
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# Model 3

## First Choose the correct answer:

1. The tape diagram representing the division process " $5 \div \frac{1}{3}$ " is .....................



2. 23 tons ..................... 2,300 kg ( > or < or = or otherwise )

3. If 3 : 5 = 12 : 5$x$, then $x$ = ..................... . ( 20 or 24 or 5 or 4)

4. $\frac{2}{3} \div \frac{1}{5}$ = ..................... ( $\frac{2}{3} \times 5$ or $\frac{3}{2} \times 5$ or $\frac{3}{2} \times \frac{1}{5}$ or $\frac{2}{3} \times \frac{1}{5}$ )

## Second Complete the following:

1. $\frac{4}{15} \div \frac{2}{5}$ = ..................... × .....................

2. A cyclist covers 8 km in 4 minutes, then he will cover ..................... km in 7 minutes.

3. The number which has no reciprocal is ..................... .

4. $\frac{2}{x}$ and $\frac{8}{12}$ are equivalent ratios, then $x$ = ..................... .

## Third Essay question:

Kenzy bought $\frac{8}{9}$ kg of apples and divided them equally among her children.

If each child took $\frac{2}{9}$ kg of apples, how many children does she have?

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# Model 4

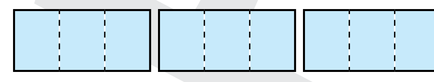
## First Choose the correct answer:

1. $7.1 \times 3 =$ .................... ( 0.213 or 2.13 or 21.3 or 213 )

2. $35 : 20 =$ .................... : .................... ( 5 : 4 or 4 : 7 or 5 : 7 or 7 : 4)

3. The reciprocal of $\frac{1}{19}$ is .................... ( 1 or $\frac{1}{9}$ or 19 or 9 )

4. The division operation represented by the following tape diagram is .................... .



( $3 \div \frac{1}{2}$ or $3 \div \frac{1}{3}$ or $3 \div \frac{1}{4}$ or $2 \div \frac{2}{3}$ )

## Second Complete the following:

1. The ratio between 450 and 540 is .................... : ....................

2. $5 \div$ .................... $= 5 \times 3$

3. .................... $\div 3.5 = 1{,}20 \div 35$

4. $\frac{(x + 3)}{14} = \frac{1}{2}$ , then $x =$ ....................

## Third Essay question:

Mark bought **3** notebooks for **6.5** LE each and **6** pens for **3.25** LE each. Calculate the money Mark paid.

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# Model 5

## First Choose the correct answer:

1. If Othman has 45 LE and Ismail has 54 LE, then the ratio of what Othman has to what Ismail has is ........ : ........ ( 5 : 6 or 6 : 5 or 9 : 2 or 7 : 9 )
2. Which ratio of the following equals $\frac{1}{5}$? ( $\frac{6}{12}$ or $\frac{4}{18}$ or $\frac{3}{15}$ or $\frac{5}{20}$ )
3. $\frac{3}{5}$ is equivalent to .................... . ( $\frac{7}{15}$ or $\frac{15}{14}$ or $\frac{15}{20}$ or $\frac{12}{20}$ )
4. $5 : x = 0.2$, then $x =$ .................... . ( 5 or 10 or 25 or 0.5)

## Second Complete the following:

1. The opposite figure represents .................... ÷ ....................
2. The reciprocal of $1\frac{3}{5}$ is .................... .
3. If $4 : 7 = x : 35$, then $x - 3 =$ .................... .
4. If 53 x 31 = 1,643, then 16.43 ÷ 3.1 = .................... .

## Third Essay question:

Lamees distributed 6 cake moulds to a group of children, and each child got $\frac{3}{4}$ cake. How many children did Lamees distribute cake among?

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# Model 6

## First Choose the correct answer:

1. $\frac{4}{6} \div$ .................. $= 1$ ( $2$ or $\frac{1}{2}$ or $6$ or $\frac{2}{3}$ )
2. $0.63 \div 0.7 =$ .................. $\div 7$ ( 0.63 or 630 or 63 or 6.3 )
3. $2a = 7b$ then $a : b =$ .............. : .............. ( 2 : 7 or 7 : 2 or 2 : 9 or 9 : 2 )
4. If $8 : x - 1 = 6 : 12$, then the value of $x =$ .................. ( 17 or 8 or 15 or 7)

## Second Complete the following:

1. $\frac{7}{9} \div \frac{1}{3} =$ ..................
2. The reciprocal of the number .................. is 23.
3. The opposite figure represents .......... $\div$ ..........
4. .................. $\div 0.3 = 4.3$

## Third Essay question:

Hana wants to plant trees; it takes her **20** minutes to plant a tree. Use a double number line to find:

1. How many trees do she plant in **2** hours?
2. How long will it take her to plant **5** trees?

**Minutes**

**Trees**

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# Model 7

## First Choose the correct answer:

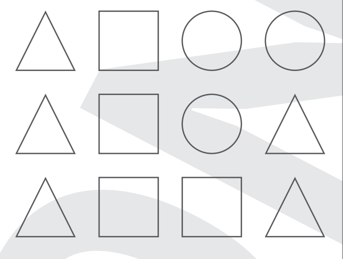
1. .................. ÷ .................. $= \frac{4}{7} \times \frac{5}{4}$ $\left( \frac{7}{4} \div \frac{5}{4} \text{ or } \frac{7}{4} \div \frac{4}{5} \text{ or } \frac{4}{7} \div \frac{5}{4} \text{ or } \frac{4}{7} \div \frac{4}{5} \right)$
2. 125 : 100 = .................... : .................... ( 5 : 3 or 5 : 4 or 2 : 3 or 7 : 5 )
3. Any number multiplied by its reciprocal equals .................... .
   (0 or 1 or the same number )
4. The ratio 8 : 12 in the simplest form equals ......... . $\left( \frac{1}{2} \text{ or } \frac{1}{3} \text{ or } \frac{3}{4} \text{ or } \frac{2}{3} \right)$

## Second Complete the following:

1. The reciprocal of $\frac{1}{7}$ is .................... .
2. 42 ÷ 0.7 = .................... ÷ 7
3. The ratio between two sides in the same square is .................. : .................. .
4. $6 \div \frac{5}{7} =$ .................... × ....................

## Third Essay question:

1. In the following figure, the ratio between the number of circles to the number of triangles is .................... : ....................



2. The ratio between the number of circles to the number of all shapes is .................... : ....................
   **(In the simplest form)**

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# Model 8

## First Choose the correct answer:

1. If an amount of food is distributed between two people in the ratio 3:4, then what the first person took = ........ the total. ( $\frac{3}{4}$ or $\frac{3}{7}$ or $\frac{4}{7}$ or $\frac{4}{3}$ )
2. 2 : 9 is equivalent to .................... . ( 9 : 2 or 18:81 or 18:4 or 20:45)
3. The number .................... is a reciprocal of itself. ( 0 or 2 or 1 or $\frac{1}{2}$ )
4. $\frac{3}{4}$ × .................... = 1 ( 0 or 1 or $\frac{4}{3}$ or $\frac{3}{4}$ )

## Second Complete the following:

1. If $\frac{A}{B} = \frac{C}{D}$ , then C x B = ....................
2. .................... ÷ 2 = $\frac{3}{8}$
3. 0.57 × .................... = 570
4. The number A is twice the number B, then B : A = .................... : .................... .

## Third Essay question:

Tamer bought 8 meters of fabric, the price of each meter is 51.9 pounds.

What is the total price of the fabric?

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# Model 9

## First Choose the correct answer:

1. If $\frac{3}{7} = \frac{9}{x}$, then $2x =$ .................... ( 42 or 14 or 21 or 28)
2. $\frac{2}{5}$ .................... the reciprocal of $\frac{5}{2}$ ($<$ or $=$ or $>$ or $\leq$)
3. The ratio between the perimeter of an equilateral triangle and its side length = .................... . ( 1 : 4 or 4 : 1 or 1 : 3 or 3 : 1 )
4. $\frac{4}{12}$ and $\frac{3}{9}$ are .................... ( equivalent ratios or not equivalent ratios)

## Second Complete the following:

1. The number A is triple the number B then **B** : **A** = .................... : ....................
2. The ratio between **360** and **480** is .................... : ....................
3. If a printer prints **18** papers in **3** minutes, then it prints .................... papers in **8** minutes.
4. The ratio between the length of one side of a square and its perimeter is .................... : .................... .

## Third Essay question:

From the following double number line, find the value of $x$ and $y$

| **Students** | 0 | $x$ | 24 | 40 |
|---|---|---|---|---|
| **Tables** | 0 | 1 | 6 | $y$ |

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# Model 10

## First Choose the correct answer:

1. Which ratio of the following equals a third? ( $\frac{4}{12}$ or $\frac{5}{20}$ or $\frac{7}{28}$ or $\frac{10}{35}$ )

2. If 1 : $x$ = 0.8, then $x$ = .................... . ( 2 or 8 or 5 or $1\frac{1}{4}$ )

3. .................... $\div \frac{1}{4} = \frac{1}{4}$ ( $\frac{16}{4}$ or $\frac{1}{4}$ or $\frac{1}{16}$ or $\frac{4}{4}$ )

4. The ratio between two number is 3 : 5. If the first number is 9 then the second number is .................... . ( 8 or 10 or 15 or 20 )

## Second Complete the following:

1. The number which has no reciprocal is ....................

2. The ratio between the length of one side of an equilateral triangle and its perimeter is .................... : ....................

3. In the ratio 2:12, the first term is ................ and the second term is ..............

4. The number A is twice the number B then A : B = .................... : ....................

## Third Essay question:

An orange export company puts 21 oranges in one box.

**Answer the following:**

1. The number of oranges in 10 boxes = ....................

2. The number of boxes which enough to contain 441 oranges = ....................

..........................................................................................

..........................................................................................

# General Revision Answers

## First:

1. [diagram: rectangle divided into 4 parts, 2 shaded]
2. $\frac{7}{2}$
3. 2.13
4. 7 : 4
5. 28
6. 6:5
7. 530
8. [diagram: 5 rectangles each divided into 3 parts, all shaded]
9. $\frac{1}{9}$
10. $\frac{1}{2}$
11. 630
12. $\frac{4}{20}$
13. $\frac{1}{2}$
14. $\frac{2}{7}$
15. 28
16. 17
17. $\frac{2}{3} \div 4$
18. $\frac{4}{7} \div \frac{4}{5}$
19. $\frac{10}{30}$
20. 7:5
21. $1\frac{1}{4}$
22. =
23. $3 \div \frac{1}{3}$
24. 1
25. $\frac{15}{25}$
26. $\frac{4}{7}$
27. 4:1
28. 18:81
29. 5
30. 1
31. >
32. $\frac{9}{17}$
33. $\frac{3}{4}$
34. $\frac{12}{15}, \frac{16}{20}$
35. 25
36. $\frac{4}{3}$
37. $\frac{3}{5}$
38. 3 :1
39. 8
40. $\frac{2}{3} \times 5$
41. $\frac{1}{12}$
42. not equivalent ratios
43. 15
44. 4:3

## Second:

1. $3 \div \frac{1}{2}$
2. $\frac{1}{6}$
3. $\frac{7}{13}$
4. 0.0006
5. $\frac{4}{15} \times \frac{3}{2}$
6. 2:3
7. BxC
8. 9 , 4 , 15 , 10
9. 20
10. $\frac{5}{8}$
11. $\frac{1}{2}$
12. 120
13. $1\frac{1}{2}$ or $\frac{3}{2}$
14. 36
15. 72
16. 7
17. $\frac{5}{18}$
18. $\frac{7}{16}$
19. 17
20. $\frac{2}{7}$
21. 0
22. 420
23. 100
24. 1:1
25. 5.3
26. $\frac{1}{4} \div 4$
27. $6 \times \frac{7}{5}$
28. 5 , 7
29. 5
30. 8.25
31. 1.84
32. 9
33. 1:2

## Third:

1. The length of each piece $\frac{3}{4} \div 15$
   $= \frac{3}{4} \times \frac{1}{15} = \frac{1}{20}$ meters
2. Number of friends = $6 \div \frac{3}{4}$
   $= 6 \times \frac{4}{3} = \frac{24}{3} = 8$ friends
3. Number of children = $\frac{8}{9} \div \frac{2}{9}$
   $= \frac{8}{9} \times \frac{9}{2} = 4$ children

4. Number of children = $6 \div \frac{2}{3} = 6 \times \frac{3}{2} = 9$ children

5. The price of each meter of fabric = 521.1 ÷ 9

   = 57.9 pounds

6. The price of notebooks = 5 x 4.75 = 23.75 pounds

   The price of pens = 6 x 3.75 = 22.5 pounds

   The money Mark paid = 23.75 + 22.5 = 46.25

7. Amr paid to the seller = 24x7.5 = 180 ponds

8. (a) The number of oranges in 10 boxes =25x10

   = 250 oranges

   (b) The number of boxes = 225 ÷ 25 = 9 boxes

9. (a) number of videos = 288 ÷ 12 = 24 videos

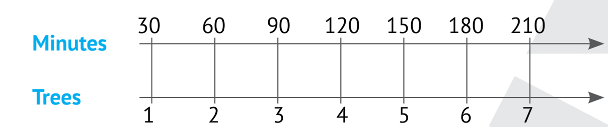
   (b) Murad will take = 7 x 12 = 84 minutes

10. $x = 4$ $\quad y = 10$

11. Laine's ratio = $\frac{36}{40} = \frac{9}{10}$

    Omar's ratio = $\frac{56}{64} = \frac{7}{8}$ they have different ratios

12.




(a) number of trees opposite to 2 hours

= 120 minutes is 4 trees

(b) it takes 210 minutes to plant 7 trees

13. One kg = 15 ÷ 5 = 3 pounds

    7 kg = 7 x 3 = 21 pounds

14. Circles : Squares = 3 : 4 ,

    Squares : All shapes = 4 : 12 = 1 : 3

# Model Exams Answers

## Model 1

### First:

1.
2. 530
3. 1:2
4. 4:1

### Second:

1. $\frac{5}{12}$
2. 36
3. $\frac{4}{5}$
4. 0.825

### Third:

Number of friends = $4 \div \frac{4}{5} = 5$ friends

## Model 2

### First:

1. $\frac{3}{5}$
2. $\frac{2}{3} \div 4$
3. $\frac{3}{13}$
4. 3:4

### Second:

1. 0.006
2. 72
3. 5 , 7
4. 9

### Third:

Each robot = $\frac{9}{10} \div 6 = \frac{3}{20}$ m

## Model 3

### First:

1.
2. >
3. 4
4. $\frac{2}{3} \times 5$

### Second:

1. $\frac{4}{15} \times \frac{5}{2}$
2. 14
3. 0
4. 3

### Third:

Number of children = $\frac{8}{9} \div \frac{2}{9} = \frac{8}{9} \times \frac{9}{2} = 4$ children

## Model 4

### First:

1. 21.3
2. 7:4
3. 19
4. $3 \div \frac{1}{3}$

### Second:

1. 5:6
2. $\frac{1}{3}$
3. 12
4. 4

### Third:

Price of books = 3x6.5 = 19.5 pounds

Price of notebooks = 6x3.25 = 19.5 pounds

Mark paid = 19.5 + 19.5 = 39 pounds

## Model 5

### First:

1. 5:6
2. $\frac{3}{15}$
3. $\frac{12}{20}$
4. 25

### Second:

1. $3 \div \frac{1}{2}$
2. $\frac{5}{8}$
3. 17
4. 5.3

### Third:

Number of children $= 6 \div \frac{3}{4} = 6 \times \frac{4}{3} = 8$ children

## Model 6

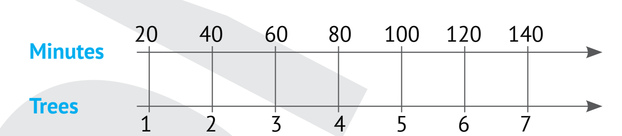
### First:

1. $\frac{2}{3}$
2. 6.3
3. 7:2
4. 17

### Second:

1. $\frac{7}{3} = 2\frac{1}{3}$
2. $\frac{1}{23}$
3. $\frac{1}{4} \div 4$
4. 1.29

### Third:




1. Number of trees = opposite to 120 minutes

   = 6 trees

2. Time = opposite to 5 trees = 100 minutes

## Model 7

### First:

1. $\frac{4}{7} \div \frac{4}{5}$
2. 5:4
3. 1
4. $\frac{2}{3}$

### Second:

1. 7
2. 420
3. 1 : 1
4. $6 \times \frac{7}{5}$

### Third:

1. Circles : Triangles = 3 : 5
2. Circles : All shapes = 3 : 12 = 1 : 4

## Model 8

### First:

1. $\frac{3}{7}$
2. 18:81
3. 1
4. $\frac{4}{3}$

### Second:

1. A x D
2. $\frac{3}{4}$
3. 1,000
4. 1:2

### Third:

The price of each meter of fabric = 8 x 51.9

= 415.2 pounds

# Model 9

## First:

1. 42
2. =
3. 3 : 1
4. equivalent ratios

## Second:

1. 1 : 3
2. 3 : 4
3. 48
4. 1 : 4

## Third:

X = 4 , y = 10

# Model 10

## First:

1. $\frac{4}{12}$
2. $1\frac{1}{4}$
3. $\frac{1}{16}$
4. 15

## Second:

1. 0
2. 1:3
3. 2 , 12
4. 2 : 1

## Third:

1. The number of oranges in 10 boxes = 21 x 10

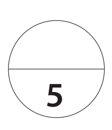
   = 210 oranges

2. The number of boxes = 441 ÷ 21 = 21 boxes

15 Marks

# Model (1)

## 1 Choose the correct answer:



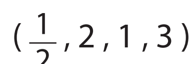
**a** The ratio of 50 : 25 is .......................... (in the simplest form)

( 1:2 , 2:1 , 1:4 , 4:1 )

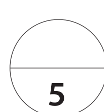
**b** $12 \div \frac{3}{8} =$ .......................... ( 36 , 32 , 96 , 48 )

**c** $0.0022 \times 100 =$ .......................... ( 0.022 , 0.22 , 2.2 , 22 )

**d** $3.5 \times 1.4 =$ .......................... ( 4.9 , 49 , 0.49 , 0.049 )

**e** $\frac{3}{8} \div \frac{3}{4} =$..........................  ( $\frac{1}{2}$ , 2 , 1 , 3 )

## 2 Complete the following:



**a** $\frac{2}{9} \div \frac{7}{5} = \frac{2}{9} \times \frac{......}{......}$

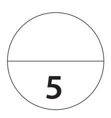
**b** If $0.3 \times 22 = 6.6$, then $0.3 \times 0.22 =$ ....................

**c** $\frac{3}{5} = \frac{24}{......}$

**d** 20 is 10% of ....................

**e** $1.8 \times$ .................... $= 1,800$

## 3 Answer the following:



**a** Write each of these ratios in its simplest form:

1. 15 : 60 ..........................................................................................

2. 30 : 25 ..........................................................................................

**b** Mona has $\frac{3}{4}$ kg of apples, she wants to distribute them among 3 bags, find the mass of each bag.

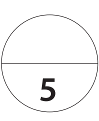
..........................................................................................

..........................................................................................

15 Marks

# Model (2)

## 1 Choose the correct answer:



a The next ratio in the pattern $\frac{1}{8}, \frac{2}{16}, \frac{3}{24}$ is $\frac{.....}{.....}$

( $\frac{32}{4}, \frac{4}{32}, \frac{4}{24}$, 32 )

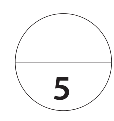
b $\frac{1}{2} \div \frac{1}{6}$ .............. $\frac{3}{4}$ ( <, >, =, otherwise )

c $6.1 \times 0.9$ .............. $6.1 \times 9$ ( <, >, =, otherwise )

d If $\frac{3}{4} = \frac{15}{A}$, then A = .................. ( 15, 20, 24, 28 )

e .............. $\div 0.3 = 0.8$ ( 24, 0.24, 2.4, 0.024 )

## 2 Complete the following:



a $7 \div \frac{.....}{.....} = 7 \times 4$

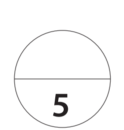
b 42 : 63 = 2 : ........

c $\frac{4}{5} \times \frac{.....}{.....} = 1$

d $0.2 \times 0.1 \times 0.3 =$ ..................

e 8% of .................. = 32

## 3 Answer the following:



a Ali bought 8 pens, if the price of each one is L.E. 3.75

How much money did he pay?

.......................................................................................................................

.......................................................................................................................

b **Find the quotient:**

1 $6 \div \frac{3}{5}$

2 $20 \div \frac{5}{4}$

.......................................... ..........................................

# Model (3)

15 Marks

## 1 Choose the correct answer:

5

a) The quotient of $6 \div \frac{3}{4}$ is .................. $(\frac{1}{6}, 8, 6, \frac{1}{8})$

b) $3.3 \times 7$ .................. $33 \times 7$ $( >, <, =,$ otherwise $)$

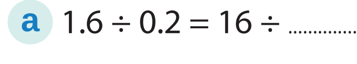
c) $\frac{3}{5}$ .................. the reciprocal of $\frac{1}{5}$ $( >, <, =,$ otherwise $)$

d) 3 : 7 is equivalent to 21 : ........... (9 , 21 , 63 , 49)

e) $\frac{3}{8} \times$ ............ $= 1$ $(3, 8, \frac{3}{8}, \frac{8}{3})$

## 2 Complete the following:

5



a) $1.6 \div 0.2 = 16 \div$ ...........

b) $\frac{3}{7} \times \frac{\dots}{\dots} = \frac{1}{7}$

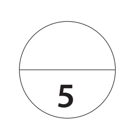


c) $\frac{4}{5} = \frac{12}{\dots} = \frac{\dots}{25}$

d) $7.8 \times$ .................. $= 780$

e) If the number of students in a class is 15 girls and 12 boys, then the ratio between the number of boys and the number of girls is .................. (in the simplest form).

## 3 Answer the following:



5

a) If the cost of 4 books is L.E. 280, what is the cost of 20 books?

..............................................................................................................

..............................................................................................................

b) **Find the missing term :**

1) $\frac{1}{2} = \frac{A}{8}$

..................................................

2) $\frac{3}{5} = \frac{18}{C}$

..................................................

15 Marks

# Model (4)

## 1 Choose the correct answer:

5

a. The quotient of $\frac{3}{4} \div 6$ is .................. $( \frac{1}{3}, \frac{1}{4}, \frac{1}{8}, \frac{1}{6} )$

b. The reciprocal of $\frac{1}{8}$ is .................. $( 1, 8, \frac{1}{8}, 18 )$

c. $\frac{4}{......} = \frac{12}{60}$ $( 5, 6, 8, 20 )$

d. $0.95 \times$ .................. $= 950$ $( 10, 100, 1000, 0.01 )$

e. .................. $\div \frac{1}{3} = 9$ $( \frac{1}{3}, 27, 3, \frac{1}{27} )$



## 2 Complete the following:

5

a. $\frac{2}{3} = \frac{8}{......} = \frac{......}{18}$

b. If $\frac{3}{12} = \frac{B}{36}$, then B = 9

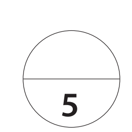
c. $3.2 \times 0.2 =$ ..................

d. 3 : 10 is equivalent to 9 : ..................



e. If $\frac{3}{5} = \frac{6}{10}$, then $3 \times 10 = 5 \times$ ..................

## 3 Answer the following:



5

a. Ali scored 175 points in 7 basketball games. Find the ratio scored by Ali in each game.

..................................................................................................................................................

..................................................................................................................................................

b. **Write each ratio in its simplest form:**

1. 80 : 100

2. 14 : 42

..................................................................... .....................................................................

**15 Marks**

## Model (5)

### 1 Choose the correct answer:

5

a) 4 .................. the reciprocal of $\frac{1}{4}$ $( >, =, <, \text{otherwise} )$

b) $0.38 \times 0.07$ .................. $0.38 \times 7$ $( >, <, =, \text{otherwise} )$

c) .................. $\div 0.2 = 1.2$ ( 24 , 0.24 , 2.4 , 0.024 )

d) If $\frac{4}{5} = \frac{16}{C}$, then C = .................. ( 15 , 20 , 24 , 28 )

e) $\frac{1}{4} \div \frac{1}{8} =$ .................. ( 2 , 1/2 , 1 , 3 )

### 2 Complete the following:

5

a) $\frac{5}{7} = \frac{10}{......} = \frac{......}{21} = \frac{20}{......}$

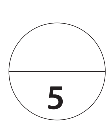
b) 2 : 5 is equivalent to 8 : ..................

c) $0.33 \times$ .................. $= 330$

d) $20 \div \frac{......}{......} = 100$

e) 3 is 20% of a number ..................

### 3 Answer the following:




a) If the ratio between masses of apples and oranges is 2 : 5 if there are 12 kg of apples, what is the mass of oranges?

..................................................................................................................

..................................................................................................................

b) Find the missing term:

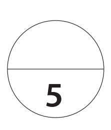
1) A : 60 = 3 : 5

2) B : 9 = 35 : 63

..................................................  ..................................................

15 Marks

# Model (1)



## 1 Choose the correct answer:

5

a The ratio of 50 : 25 is .......................... (in the simplest form)

( 1:2 , 2:1 , 1:4 , 4:1 )

b $12 \div \frac{3}{8} =$ .......................... ( 36 , 32 , 96 , 48 )

c $0.0022 \times 100 =$ .......................... ( 0.022 , 0.22 , 2.2 , 22 )

d $3.5 \times 1.4 =$ .......................... ( 4.9 , 49 , 0.49 , 0.049 )

e $\frac{3}{8} \div \frac{3}{4} =$.......................... ( $\frac{1}{2}$ , 2 , 1 , 3 )

## 2 Complete the following:

5

a $\frac{2}{9} \div \frac{7}{5} = \frac{2}{9} \times \frac{5}{7}$

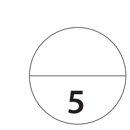
b If $0.3 \times 22 = 6.6$, then $0.3 \times 0.22 = 0.066$

c $\frac{3}{5} = \frac{24}{40}$

d 20 is 10% of 200

e $1.8 \times 1{,}000 = 1{,}800$

## 3 Answer the following:



5

a Write each of these ratios in its simplest form:

1 15 : 60

1 : 4

2 30 : 25

6 : 5

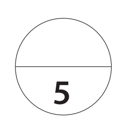
b Mona has $\frac{3}{4}$ kg of apples, she wants to distribute them among 3 bags, find the mass of each bag.

The mass of each bag $= \frac{3}{4} \div 3 = \frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$ kg

15 Marks

# Model (2)

## 1 Choose the correct answer:



**a** The next ratio in the pattern $\frac{1}{8}, \frac{2}{16}, \frac{3}{24}$ is $\frac{.....}{.....}$

( $\frac{32}{4}$ , $\frac{4}{32}$ , $\frac{4}{24}$ , 32 )

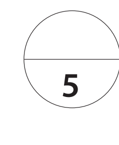
**b** $\frac{1}{2} \div \frac{1}{6}$ .............. $\frac{3}{4}$ ( $<$ , $>$ , $=$ , otherwise )

**c** $6.1 \times 0.9$ .............. $6.1 \times 9$ ( $<$ , $>$ , $=$ , otherwise )

**d** If $\frac{3}{4} = \frac{15}{A}$, then A = .............. ( 15 , 20 , 24 , 28 )

**e** .............. $\div 0.3 = 0.8$ ( 24 , 0.24 , 2.4 , 0.024 )

## 2 Complete the following:



**a** $7 \div \frac{1}{4} = 7 \times 4$

**b** $42 : 63 = 2 : 3$

**c** $\frac{4}{5} \times \frac{5}{4} = 1$

**d** $0.2 \times 0.1 \times 0.3 = 0.006$

**e** 8% of 400 = 32

## 3 Answer the following:

5

**a** Ali bought 8 pens, if the price of each one is L.E. 3.75

How much money did he pay?

The money paid = $8 \times 3.75$ = L.E. 30

**b** **Find the quotient:**

**1** $6 \div \frac{3}{5}$

$6 \times \frac{5}{3} = \frac{30}{3} = 10$

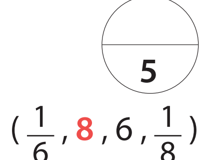
**2** $20 \div \frac{5}{4}$

$20 \times \frac{4}{5} = \frac{80}{5} = 16$

15 Marks

# Model (3)

## 1 Choose the correct answer:




a The quotient of $6 \div \frac{3}{4}$ is .................. ( $\frac{1}{6}$ , 8 , 6 , $\frac{1}{8}$ )

b $3.3 \times 7$ .................. $33 \times 7$ ( > , < , = , otherwise )

c $\frac{3}{5}$ .................. the reciprocal of $\frac{1}{5}$ ( > , < , = , otherwise )

d 3 : 7 is equivalent to 21 : ............ ( 9 , 21 , 63 , 49 )

e $\frac{3}{8} \times$ .............. $=1$ ( 3 , 8 , $\frac{3}{8}$ , $\frac{8}{3}$ )

## 2 Complete the following:

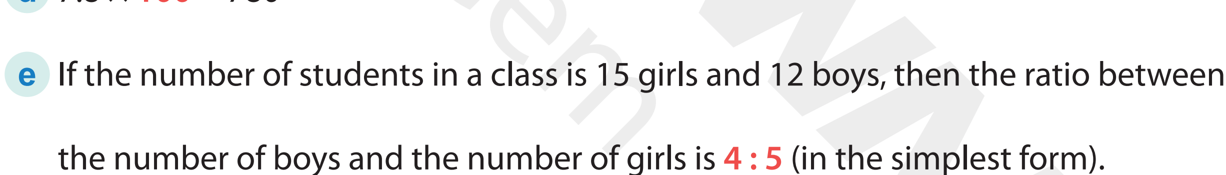
5

a $1.6 \div 0.2 = 16 \div$ 2

b $\frac{3}{7} \times \frac{1}{3} = \frac{1}{7}$

c $\frac{4}{5} = \frac{12}{15} = \frac{20}{25}$

d $7.8 \times$ 100 $= 780$



e If the number of students in a class is 15 girls and 12 boys, then the ratio between the number of boys and the number of girls is 4 : 5 (in the simplest form).

## 3 Answer the following:

5

a If the cost of 4 books is L.E. 280, what is the cost of 20 books?

$\frac{4}{280} = \frac{20}{?}$ , the cost of 20 books $= \frac{20 \times 280}{4} =$ L.E. 1,400

b **Find the missing term :**

1 $\frac{1}{2} = \frac{A}{8}$

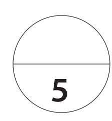
A = 4

2 $\frac{3}{5} = \frac{18}{C}$

C = 30

## 15 Marks — Model (4)

### 1 Choose the correct answer:



a. The quotient of $\frac{3}{4} \div 6$ is ........ $\left( \frac{1}{3}, \frac{1}{4}, \frac{1}{8}, \frac{1}{6} \right)$ — **$\frac{1}{8}$**

b. The reciprocal of $\frac{1}{8}$ is ........ $\left( 1, 8, \frac{1}{8}, 18 \right)$ — **8**

c. $\frac{4}{......} = \frac{12}{60}$ $( 5, 6, 8, 20 )$ — **20**

d. $0.95 \times ........ = 950$ $( 10, 100, 1000, 0.01 )$ — **1000**

e. $........ \div \frac{1}{3} = 9$ $\left( \frac{1}{3}, 27, 3, \frac{1}{27} \right)$ — **3**

### 2 Complete the following:

5

a. $\frac{2}{3} = \frac{8}{\mathbf{12}} = \frac{\mathbf{12}}{18}$

b. If $\frac{3}{12} = \frac{B}{36}$, then B = 9

c. $3.2 \times 0.2 =$ **0.64**

d. 3 : 10 is equivalent to 9 : **30**

e. If $\frac{3}{5} = \frac{6}{10}$, then $3 \times 10 = 5 \times$ **6**

### 3 Answer the following:

5

a. Ali scored 175 points in 7 basketball games. Find the ratio scored by Ali in each game.

**The ratio = $\frac{175}{7} = \frac{25}{1}$ = 25 : 1 points per game.**

b. **Write each ratio in its simplest form:**

1. 80 : 100

   **4 : 5**

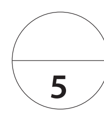
2. 14 : 42

   **1 : 3**

15 Marks

# Model (5)

## 1 Choose the correct answer:



a) 4 .................. the reciprocal of $\frac{1}{4}$ ( > , **=** , < , otherwise )

b) $0.38 \times 0.07$ .................. $0.38 \times 7$ ( > , **<** , = , otherwise )

c) .................. $\div 0.2 = 1.2$ ( 24 , **0.24** , 2.4 , 0.024 )

d) If $\frac{4}{5} = \frac{16}{C}$, then C = .................. ( 15 , **20** , 24 , 28 )

e) $\frac{1}{4} \div \frac{1}{8} =$ .................. ( **2** , 1/2 , 1 , 3 )

## 2 Complete the following:

5

a) $\frac{5}{7} = \frac{10}{\mathbf{14}} = \frac{\mathbf{15}}{21} = \frac{20}{\mathbf{28}}$

b) 2 : 5 is equivalent to 8 : **20**

c) $0.33 \times$ **1,000** $= 330$

d) $20 \div \frac{\mathbf{1}}{\mathbf{5}} = 100$

e) 3 is 20% of a number **15**

## 3 Answer the following:

5

a) If the ratio between masses of apples and oranges is 2 : 5 if there are 12 kg of apples, what is the mass of oranges?

$\frac{2}{5} = \frac{12}{?}$, **the mass of oranges** $= \frac{5 \times 12}{2} = 30$ **kg**

b) Find the missing term:

1) A : 60 = 3 : 5

**A = 36**

2) B : 9 = 35 : 63

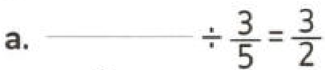
**B = 5**

## March Tests | Till lesson **6** unit **10**




## Test 1

**1. Choose the correct answer.** (5 marks)



a. ............ $\div \frac{3}{5} = \frac{3}{2}$

A. $\frac{2}{5}$ B. $\frac{9}{10}$ C. $\frac{5}{2}$ D. $\frac{6}{10}$

b. $\frac{1\text{ km}}{\text{.......}}$ is a conversion factor.

A. 2 hours B. 100 cm C. 1,000 km D. 1,000 m

c. If the ratio between two numbers is 3 : 5 and the smaller one is 15 , then the greater one is ............

A. 9 B. 25 C. 16 D. 34

d. 13.31 ÷ 1.1 = ............ ÷ 11

A. 1,331 B. 1.331 C. 13.31 D. 133.1

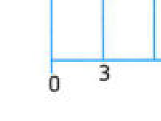
e. 120 m per min = ............ cm per sec.

A. 200 B. 720 C. 1,200 D. 12,000

**2. Complete the following.** (5 marks)



a. From the opposite double number line ,
x = ............




b. The reciprocal of $\frac{3}{7}$ is ............

c. If $\frac{4}{x+1} = \frac{8}{10}$ , then x = ............

d. A car consumes 20 liters per 200 km , then its unit rate is ............ km per liter.

e. 0.036 ÷ 0.3 = ............

**3.** a. The ratio between number of cats and dogs is 2 : 7 and the sum of them is 45.
**Find the number of each by using the tape diagram.** (2 marks)

............

b. If the price of one meter of cloth is 6.45 L.E.
**What is the cost of 3.6 meters of cloth ?** (3 marks)

............




## Test 2

**1. Choose the correct answer.** (5 marks)

a. If the ratio $\frac{5}{6}$ is equivalent to x – 1 : 12, then x = ..........

A. 9 B. 10 C. 11 D. 4

b. Which of the following is a unit rate ?

A. 10 spoons of sugar for 8 cups
B. 2 liters per bottle
C. 140 km per 4 hours
D. 30 L.E. per 3 kg

c. $\frac{3}{4} \div \frac{9}{16} =$ ..........

A. $\frac{4}{3}$ B. $\frac{3}{4}$ C. $\frac{27}{64}$ D. $\frac{64}{27}$

d. 180 km per hour = .......... m per min.

A. 3 B. 30 C. 300 D. 3,000

e. From the opposite figure, the ratio AB : CB = ..........

A B C

A. 3 : 4 B. 2 : 3 C. $\frac{2}{4}$ D. 2 : 5

**2. Complete the following.** (5 marks)

a. If $\frac{2}{x} = \frac{12}{18}$, then x = ..........

b. If 35 × 207 = 7,245, then 7.245 ÷ 35 = ..........

c. From the opposite model, $3 \div \frac{1}{3} =$ ..........

| 1 whole | | | 1 whole | | | 1 whole | | |
|---|---|---|---|---|---|---|---|---|
| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

d. 42 L.E. for 7 kg, then the cost of 42 kg is ..........

e. 0.3 × 0.12 = ..........

**3. a.** Each stone block in the Great Pyramid has a mass of about 2,300 kilograms.
**About how much is the mass of one block in grams ?** (2 marks)

**b.** If Wael has 45 L.E. and Sameh has 35 L.E.
**Find the ratio between what Wael has to the total money with them.** (3 marks)

# Unit 8

## Modeling Fraction Division with Tape Diagrams

**Ex 1**

$4 \div \frac{1}{3}$

| 1 Whole | | | 1 Whole | | | 1 Whole | | | 1 Whole | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

There are 12 parts / So, $4 \div \frac{1}{3} = 12$

**Ex 2**

$4 \div \frac{2}{3}$

| 1 Whole | | | 1 Whole | | | 1 Whole | | | 1 Whole | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

There are 6 parts of $\frac{2}{3}$ / So, $4 \div \frac{2}{3} = 6$

**Ex 3**

$\frac{1}{2} \div 6$

| $\frac{1}{2}$ | | | | | | $\frac{1}{2}$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ |

There are 12 parts & each part = $\frac{1}{12}$ / So, $\frac{1}{2} \div 6 = \frac{1}{12}$

**Ex 4** $\frac{2}{5} \div 4$

| $\frac{1}{5}$ | | $\frac{1}{5}$ | | $\frac{1}{5}$ | | $\frac{1}{5}$ | | $\frac{1}{5}$ | |
|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ |

There are 10 parts & each part = $\frac{1}{10}$ / So, $\frac{2}{5} \div 4 = \frac{1}{10}$

**Ex 4** $\frac{8}{10} \div \frac{2}{5}$

| $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ |
|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{5}$ | | $\frac{1}{5}$ | | $\frac{1}{5}$ | | $\frac{1}{5}$ | | $\frac{1}{5}$ | |

There are 2 parts & each part = $\frac{2}{5}$ / So, $\frac{8}{10} \div \frac{2}{5} = 2$

**Learn**

$\frac{1}{2}$ of 6 = $\frac{2}{5} \times 6$ = $6 \div 2$

**Practice**

a) $12 \div 3 = 12 \times \frac{\dots}{\dots}$

b) $20 \div 4 = \dots \times \frac{\dots}{\dots}$

c) $15 \div 5 = \dots \times \frac{\dots}{\dots}$

d) $21 \div 7 = \dots \times \frac{\dots}{\dots}$

e) Fifth of 15 = 15 ÷ ...... = ...... × $\frac{\dots}{\dots}$

f) $\frac{1}{7}$ of 21 = 21 ÷ ...... = ...... × $\frac{\dots}{\dots}$

g) Half of 20 = 20 ÷ ...... = ...... × $\frac{\dots}{\dots}$

h) $\frac{1}{3}$ of 12 = 12 ÷ ...... = ...... × $\frac{\dots}{\dots}$

Divide

a) $3 \div \frac{3}{5} = ...... \times \frac{......}{......} = ......$

b) $\frac{3}{10} \div 2 = \frac{......}{......} \times \frac{......}{......} = \frac{......}{......}$

c) $\frac{3}{8} \div \frac{1}{4} = \frac{......}{......} \times \frac{......}{......} = \frac{......}{......}$

$\frac{5}{3}$ reciprocal of $\frac{3}{5}$

$\frac{1}{3}$ reciprocal of 3

0 has No reciprocal

1 is the reciprocal of itself

## Multiplying & Dividing

Multiply

2.37 x 5 = .........

1.2 x 0.4 = .........

1.25 x 0.24 = .........

6.8 x 3.2 = .........

Divide

0.28 ÷ 0.04 = .........

3.6 ÷ 0.4 = .........

0.75 ÷ 0.25 = .........

27.2 ÷ 0.8 = .........

29.76 ÷ 6.4 = .........

0.1134 ÷ 0.18 = .........

Exercise

## Q1- Find the quotient in the simplest form :-

a) $\frac{2}{5} \div \frac{3}{5} =$ .........

b) $\frac{3}{8} \div \frac{3}{4} =$ .........

c) $\frac{7}{9} \div \frac{7}{12} =$ .........

d) $\frac{2}{3} \div \frac{3}{7} =$ .........

e) $\frac{4}{5} \div \frac{1}{2} =$ .........

f) $\frac{1}{2} \div \frac{1}{12} =$ .........

g) $6 \div \frac{1}{3} =$ .........

h) $12 \div \frac{3}{4} =$ .........

i) $11 \div \frac{11}{7} =$ .........

j) $45 \div \frac{9}{10} =$ .........

k) $8 \div \frac{3}{5} =$ .........

l) $10 \div \frac{5}{7} =$ .........

m) $\frac{1}{3} \div$ ...... $= 8$

n) $\frac{1}{3} \times$ ...... $= 1$

o) $\frac{2}{5} \div$ ...... $= \frac{2}{3}$

p) ...... $\times \frac{2}{3} = \frac{4}{5}$

q) ...... $\div \frac{5}{7} = \frac{1}{5}$

r) ...... $\times \frac{7}{8} = 1$

## Q2-Answer the following :-

a) $2.3 \times 4 =$ ...............

b) $0.65 \times 0.2 =$ ...............

c) $0.676 \times 0.1 =$ ...............

d) $2.4 \times 3.6 =$ ...............

e) $0.251 \times 9 =$ .........

f) $7.2 \times 0.9 =$ .........

g) $1.6 \times 0.04 =$ .........

h) $0.6 \times 0.2 =$ .........

i) $0.8 \div 0.2 =$

j) $0.28 \div 0.04 =$

k) $54.45 \div 0.9 =$ ……………

l) $4.8 \div 0.16 =$ ……………

m) Fifth of 15 = ………………

n) $\frac{2}{3}$ of 27 = ………………

o) $3.3 \times 1.1 =$ ………………

p) The number of $\frac{2}{5}$ in 2 is …………………

q) $\frac{3}{4} \div m = \frac{3}{8}$ , then m = ………………

r) $\frac{3}{4} \times m = \frac{3}{8}$ , then m = ………………

s) A runner covered $\frac{4}{5}$ kilometer in 2 Laps. How many kilometers did he run in one lap ?

t) A box of table tennis balls weighs $\frac{5}{9}$ of a kiLogram. If each ball weighs $\frac{15}{81}$ of a kilogram , then how many balls are there in the box ?

u) Your recipe requires $\frac{2}{3}$ cup of flour , but you have $\frac{3}{4}$ cup of flour How many batches can you make ?

## Q3-Choose the correct answer :-

1) $4 \div \frac{1}{3} =$ ..................

a) 6 b) $\frac{3}{4}$

c) 4 d) 12

| 1 | | | 1 | | | 1 | | | 1 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

2) $\frac{1}{2} \div 8 =$ ..................

a) $\frac{1}{8}$ b) $\frac{1}{4}$

c) 4 d) $\frac{1}{16}$

| $\frac{1}{2}$ | | | | | | | |
|---|---|---|---|---|---|---|---|
| $\frac{1}{16}$ | $\frac{1}{16}$ | $\frac{1}{16}$ | $\frac{1}{16}$ | $\frac{1}{16}$ | $\frac{1}{16}$ | $\frac{1}{16}$ | $\frac{1}{16}$ |

3) $\frac{1}{4} \div 5 =$ ..................

a) $\frac{1}{20}$ b) $\frac{4}{5}$

c) 5 d) 20

| $\frac{1}{4}$ | | | | |
|---|---|---|---|---|
| $\frac{1}{20}$ | $\frac{1}{20}$ | $\frac{1}{20}$ | $\frac{1}{20}$ | $\frac{1}{20}$ |

4) You can use the opposite model to solve the problem ......................

a) $\frac{1}{10} \div \frac{1}{2}$ b) $\frac{1}{10} \div 5$

c) $\frac{1}{2} \div 5$ d) $\frac{1}{2} \div 10$

| $\frac{1}{2}$ | | | | | $\frac{1}{2}$ | | | | |
|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ |

# Unit 9




Is a comparison of two quantities that can be written as

a to b    a : b    $\frac{a}{b}$

**Ex**, A basket of fruit contains 6 apptes,4 bananas, and 3 oranges. Write each ratio in all three forms.

a. bananas to apples. ................................................................

b. oranges to bananas. ................................................................

c. oranges to total pieces of fruits. ....................................................

d. How are the ratios in (a) and (b) different from the ratio in (c) ?

................................................................................................

## Different between fractions & decimals

| The fraction | The ratio |
|---|---|
| is defined as a part of a whole or part of a group.<br>the denominator represents the total number of equal parts. | is a comparison of two quantities can represent<br>part-to-part,<br>part-to-whole,<br>whole-to-part. |

**Ex**, In a group of five students, there are 3 boys and 2 girls.

The fraction that represent number of boys = ......................

The fraction that represent number of girts = ......................

The ratio of girts to boys is ...................... ( part-to-part )

The ratio of boys to girls is ...................... ( part-to-part )

The ratio of girts to students is ........................ ( part-to-whole )

The ratio of boys to students is ........................ ( part-to-whole )

## Different between comparing using ratio and without ratio

| Using ratio | Without ratio |
|---|---|
| There are ten students who like art compared to seven students who like math. | Three more students like art than math. |
| Six out of twenty students Like basketball. | Fewer students like basketball than football |
| For every child who likes apple,two children like bananas. | Five more children prefer bananas than prefer a apples |
| The number of students who Like science best compared to the number of students who Like math best is three to five. | Number of students who like science best is less than the number of students who like math best by 4 students. |

### Practice 1

Find each ratio in simplest form ( using GCF ) :-

3 : 6 4 : 8 12 : 18 18 : 48

..........................................................................................

..........................................................................................

6 : 14 15 : 24 21 : 9 27 : 36

..........................................................................................

..........................................................................................

## Representing ratios (using ratios to extend pattern)

Farida wants to fill a vase with pink & orange flowers And the ratio between pink & orange is 2 : 3

She makes this table to showthe extension of number of flowers .

Use the data from her extended colored to complete the table .

| Number of pink flowers | Number of orange flowers | Number of total flowers |
|---|---|---|
| 2 | 3 | 5 |
| 4 | …… | 10 |
| 6 | …… | 15 |
| …… | 12 | 20 |
| …… | …… | 25 |

### Practice 2

1) If the ratio between two numbers is 7:4 and the smaller number is 12 Find the greater number.

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

2) If the ratio between a and b is 2:9 and the greater number is 18 Find the smaller number.

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

3) If the ratio between two numbers is 1:5 and the sum of them is 36 Find the two numbers.

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

## Equivalent ratios

Equivalent ratios have the same value

**Ex 1** Write 18 : 24 in the simplest form

writing ratios greater than 1 ore expressed as improper fractions and not as mixed numbers

18 : 24 = $\frac{18}{24}$ = $\frac{18 \div 6}{24 \div 6}$ = $\frac{3}{4}$

**So** 18 : 24 = 18 : 24 **or** $\frac{18}{24}$ = $\frac{3}{4}$

**Ex 2** Determine whether the ratios 250 kilometers in 4 hours and 500 kilometers in 8 hours are equivalent or not.

250 kilometers : 4 hours = $\frac{\dots\dots}{\dots\dots}$

500 kilometers : 8 hours = $\frac{\dots\dots}{\dots\dots}$

**So** They are equivalent

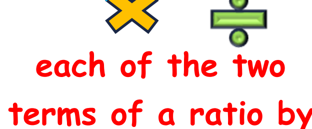
## Finding equivalent ratios

**Ex 3** Give two other ratios that are equivalent to each ratio:-

a) 5 to 3 ..................................................

b) 10 : 15 ...............................................

c) $\frac{6}{9}$ ...............................................................



each of the two terms of a ratio by the same non-zero number

**Ex 4** Farida bought 3 kg of orange she paid 36 L.E. How much money does she pay to buy 6 kg?

...........................................................................................................................................

...........................................................................................................................................

**Ex 5** Complete the following table :

| 2 | 4 | 6 | ...... | ...... | ...... |
|---|---|---|---|---|---|
| 5 | ...... | ...... | 25 | 35 | 45 |

## Practice 3

### Q1/ Find the missing number :-

1) $\frac{5}{8} = \frac{15}{......}$
2) $\frac{35}{42} = \frac{......}{6}$
3) $\frac{13}{12} = \frac{26}{......}$

### Q2/ Complete the following tables :-

| 4 | ...... |
|---|---|
| 5 | 10 |

| 6 | 12 |
|---|---|
| 18 | ...... |

| 3 | ...... | ...... | 10 | ...... | 15 |
|---|---|---|---|---|---|
| 9 | 12 | 27 | ...... | 36 | ...... |

### Q3/ Determine whether the ratios are equivalent or not:-

a) 20 female lions to 8 male Lions 34 female Lions to 10 male lions.

..............................................................................................................

..............................................................................................................

b) 4 L.E. for every 16 gram. 10 L.E. for every 40 gram.

..............................................................................................................

..............................................................................................................

**Q4/** Malak bought 3 kg of banana she paid 45 L.E. '' How much money does she pay to buy 6 kg?

..............................................................................................................

..............................................................................................................

## Representing ratios with tape diagrams

**Ex 1** Represent the following ratios with tape :

3 : 2

2 : 5

### Practice 4

**Ex 2** The ratio of red pens to blue pens in a package is 2 : 5. if there are 35 blue pens in the package, how many red pens are in the package?

.................................................................................................................................................

.................................................................................................................................................

.................................................................................................................................................

**Ex 3** The ratio of boys to girls in the sixth primary is 3 : 5, if there are 20 more girls than boys,how many total students are there in the sixth primary ?

.................................................................................................................................................

.................................................................................................................................................

.................................................................................................................................................

**Ex 4** The ratio of small dogs to large dogs at the dog show is 5 : 4. if there are 27 dogs in the show, how many large dogs are there ?

.................................................................................................................................................

.................................................................................................................................................

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## Analyzing equivalent ratios with double number line

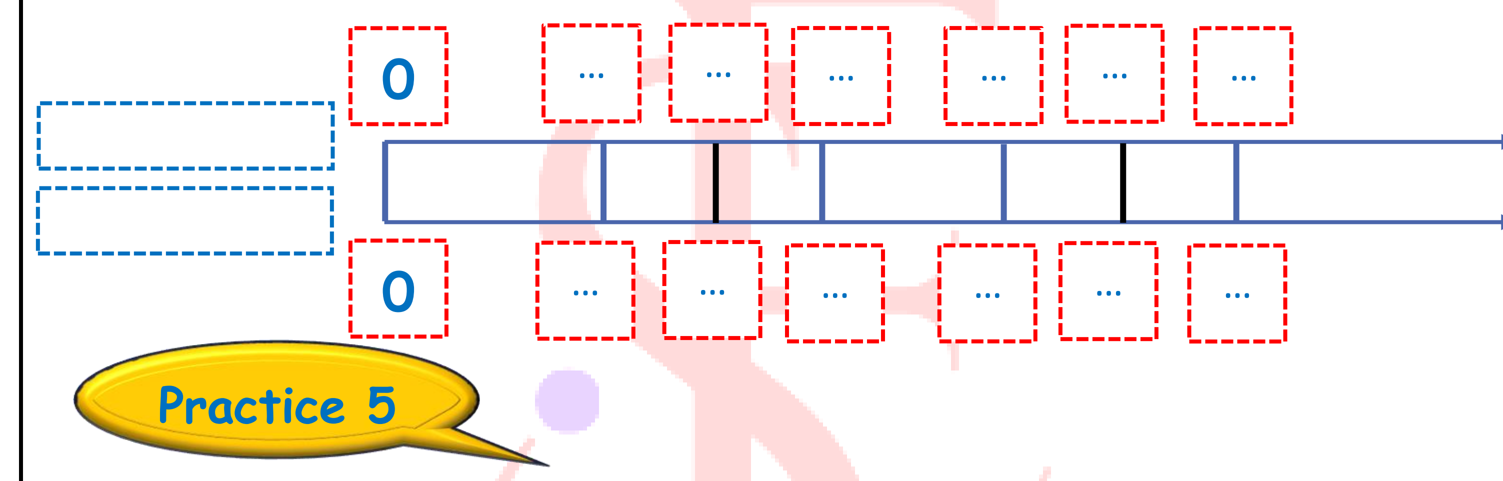
**Ex 5** The opposite table shows the distance in meters travelled by a car and the time taken in seconds.

| Distance | time |
|---|---|
| 8 | 2 |
| 16 | 4 |
| 24 | 6 |
| 28 | 7 |

a. Represent this data by double number Line

b. What is the travelled distance in 3 seconds ?

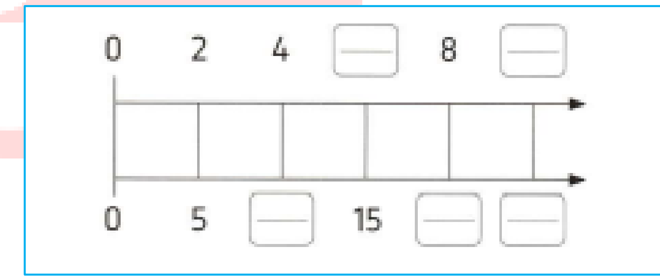
c. What is the time taken to travell 26 meters ?



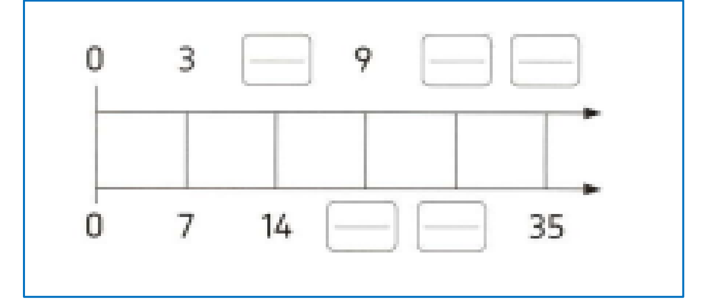

**Practice 5**

Complete the following tables using the given ratios :

a) 2 : 5




b) 3 : 7



## Comparing & analyzing ratios

Property of equivalent fractions $\frac{a}{b} = \frac{c}{d}$

a & b are called extrems c & d are called means

a × d = c × b

**Ex 1** Show which of the following ratios are equivalent or not :-

a) $\frac{8}{24} = \frac{4}{6}$

b) $\frac{6}{18} = \frac{8}{20}$

**Ex 2** Find the value of X of the following:-

a) $\frac{6}{9} = \frac{X}{18}$

b) $\frac{3}{X} = \frac{12}{40}$

c) $\frac{X}{7} = \frac{24}{21}$

d) $\frac{7}{11} = \frac{21}{X}$

**Note**

The ratio between side length of square and its perimeter is 1 : 4

**Note**

The ratio between side length of triangle and its perimeter is 1 : 3

Exercise

Q1/ Complete the following :-

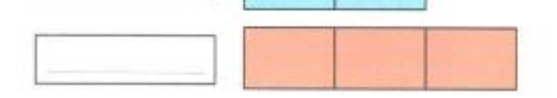
1) 6:8 = ……………………………… ( in the simplest form )
2) 21:9 = ……………………………… ( in the simplest form )
3) 25:75 = ……………………………… ( in the simplest form )
4) 150:250 = ……………………………… ( in the simplest form )
5) 200:300 ……………………………… ( in the simplest form )
6) The ratio between side length of square and its perimeter is ……:……
7) The ratio between two side lengths of square is ……:……
8) The ratio between side length of triangle and its perimeter is ……:……
9) The ratio between perimeter of square and its side lengths is ……:……
10) The total number of students in a class is 40 and the boys are 15 , then the ratio between girls and boys is ………………
11) The ratio between a and b is 4: 5 if a = 20,then b= ………………
12) The ratio between two numbers is 2:7 if the greater number is 21 , then the smaller number is ……………….
13) if the ratio between two numbers is 4: 3 and the sum of them is 14, then the two numbers are ……………
14) $\frac{5}{8} = \frac{15}{\ldots}$
15) $\frac{35}{42} = \frac{\ldots}{6}$
16) $\frac{9}{8} = \frac{55}{\ldots}$
17) $\frac{100}{150} = \frac{10}{\ldots}$
18) If 4 to 9 is equivalent to $\frac{X}{36}$ then x = …………………
19) Malak has 3 red flowers and 4 white flowers. Farida has 9 red flowers and 12 white Lowers. Are the ratio between number of red and white flowers are equivalent with Malak and Farida ?

……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………

20) If the ratio between the price of one kilogram of tomatoes and potatoes is 2 : 3 and the total price of tomatoes and potatoes is 20 L.E.

a. Compete the tape diagram.

b. The value of each block = ……………



21) If the ratio between the number of apples and the number of oranges is 2:5 and the number of apples is 10 .

a. Use the first empty boxes to show what each tape represents

b. The value of each block = ……………

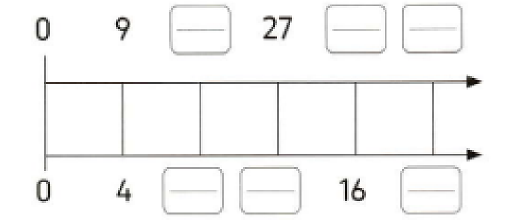
22) A wire was divided into 2 parts in the ratio 5 : 9. if the length of the shortest part equals 45 cm , find the total length of the wire using tape diagrams .

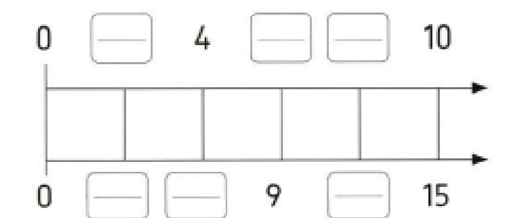
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## Q2/ Complete the following double number Lines .




## Q3/ Complete the following table .

| 2 | 5 | — | 8 | — |
|---|---|---|---|---|
| 12 | — | 36 | — | 60 |

×  ÷






# Q1: Choose the correct answer:

**1** The division operation represented by the following tape diagram is ................



ⓐ $3 \div \frac{1}{2}$ ⓑ $3 \div \frac{1}{3}$ ⓒ $3 \div \frac{1}{4}$ ⓓ $3 \div \frac{2}{5}$

**2** The reciprocal of $\frac{1}{8}$ is ..........

ⓐ -8 ⓑ 8 ⓒ $\frac{1}{8}$ ⓓ $-\frac{1}{8}$

**3** The reciprocal of $3\frac{3}{4}$ is ..........

ⓐ $\frac{15}{4}$ ⓑ $3\frac{4}{3}$ ⓒ $\frac{4}{15}$ ⓓ $3\frac{4}{15}$

**4** $\frac{5}{7} \div$ ........ = 1

ⓐ $\frac{5}{7}$ ⓑ 1 ⓒ $\frac{1}{5}$ ⓓ $\frac{7}{5}$

**5** $\frac{3}{8} \times$ ........ = 1

ⓐ $\frac{3}{8}$ ⓑ 1 ⓒ $\frac{8}{5}$ ⓓ $2\frac{2}{3}$

**6** $\frac{1}{5} \times \frac{1}{5}$ = .........

ⓐ $\frac{1}{25}$ ⓑ 1 ⓒ 25 ⓓ 5

**7** Any number multiplied by its reciprocal equals ................

ⓐ 1 ⓑ 0 ⓒ same number ⓓ double number

**8** The reciprocal of the number ................ is $4\frac{2}{5}$

ⓐ $\frac{22}{5}$ ⓑ $4\frac{5}{2}$ ⓒ $\frac{5}{22}$ ⓓ $\frac{2}{11}$

**9** $\frac{5}{8} \div$ ......... = $\frac{1}{2}$

ⓐ $\frac{8}{5}$ ⓑ $1\frac{1}{4}$ ⓒ $\frac{5}{16}$ ⓓ $\frac{4}{5}$





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**10** ........ $\div \frac{1}{2} = \frac{1}{3}$

(a) $\frac{1}{6}$ (b) 6 (c) $\frac{3}{1}$ (d) $\frac{2}{3}$

**11** $4.5 \div 0.09 =$ ................ $\div 9$

(a) 0.45 (b) 450 (c) 45 (d) 4.5

**12** How many $\frac{3}{5}$´s are in 9 apples?

(a) $\frac{27}{5}$ (b) 15 (c) $\frac{1}{15}$ (d) $15\frac{2}{3}$

**13** If $25 \times 33 = 825$, then $0.25 \times 3.3 =$ ................

(a) 82.5 (b) 8.25 (c) 0.852 (d) 0.825

**14** ............... $\div 2.15 = 1{,}200 \div 215$

(a) 120 (b) 12 (c) 1.2 (d) 1200

**15** If $127.92 \div 4.1 = 31.2$, then $12.792 \div 4.1 =$ .........

(a) 312 (b) 3.12 (c) 31.2 (d) 0.312

**16** ......... $\times \frac{3}{5} = \frac{3}{4}$

(a) $\frac{4}{15}$ (b) $1\frac{1}{4}$ (c) $\frac{9}{20}$ (d) $2\frac{2}{9}$

**17** $0.55 \div 0.011 =$ .......... $\div 11$

(a) 55 (b) 550 (c) 5,500 (d) 5.5

**18** $5.2 \times 0.3 =$ ...............

(a) 0.156 (b) 1.56 (c) 15.6 (d) 156

**19** The tape diagram representing the division process ( $3 \div \frac{1}{2}$ ) is .........

(a) (b) (c) (d)

**20** $5 \times$ ......... $= 1$

(a) $\frac{25}{5}$ (b) 1 (c) $\frac{1}{5}$ (d) 0

## Q2: Complete the following:

1. The reciprocal of 9 is ..........
2. ........ $\div \frac{2}{5} = \frac{2}{7}$
3. $\frac{5}{7} \div \frac{2}{14}$ = ........ × ........ = ........
4. 0.07 × 0.14 = ................
5. ....... $\div \frac{5}{7} = \frac{7}{8}$ × .........
6. $10 \div \frac{5}{9}$ = ........
7. 2 ÷ 0.25 = ............ ÷ ............ = .............
8. ....... ÷ ....... = $\frac{3}{5} \times \frac{4}{3}$
9. $\frac{2}{3} \div \frac{4}{9}$ = ........
10. $4 \div \frac{3}{5}$ = ............
11. $\frac{6}{7} \div 3$ = ............
12. ................ ÷ 0.8 = 2.3
13. 1.5 × ................ = 150
14. $\frac{6}{9}$ of $\frac{9}{6}$ = ..........
15. $\frac{5}{6}$ ÷ ....... = 5
16. If 10.35 ÷ 2.3 = 4.5, then 23 x 4.5 = ............
17. The number which which has no reciprocal is ...........




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## Q3: Answer the following:

**1** Soha divided 127.5 LE among her three sons. Find the share of each one.

..........................................................................................................

**2** Find the value of y in each of the following.

a] $\frac{4}{5} \div y = \frac{1}{4}$

b] $\frac{4}{5} \times y = 1$

**3** Farida wants to divide a piece of fabric of length $\frac{3}{4}$ meter into smaller pieces each of length $\frac{3}{8}$ meter. How many pieces are there?

..........................................................................................................

**4** If a slice of one pizza costs 12.25 pounds, how much do 13 pieces of the same type cost?

..........................................................................................................

**5** A rectangle with an area of 26.56 square meters and a length of 8.3 m. Calculate the width of the rectangle.

..........................................................................................................



**6** If 53 x 31 = 1,643, then:

a] 16.43 ÷ 31 = ................

b] 3.1 × 0.53 = ................

c] 31 × 5.3 = ................

d] 1643 ÷ 5.3 = ................

**7** Answer the following:

a] $\frac{1}{2} \div 2 =$ ................

b] $3\frac{3}{5} \times \frac{5}{6} =$ ..........

c] $6 \times \frac{1}{6} =$ ................

d] $12 \div \frac{4}{9} =$ ................

















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## Q1: Choose the correct answer:

**1** Sandy spends 120 LE in 4 days, so the rate of what she spends per day is ........... LE/day.

ⓐ 300 ⓑ 25 ⓒ 30 ⓓ 250

**2** The ratio between the perimeter of a square to its side length is ...........

ⓐ 1 : 4 ⓑ 4 : 1 ⓒ 3 : 1 ⓓ 1 : 3

**3** The ratio between the side of an equilateral triangle to its perimeter is ......... : .........

ⓐ 1 : 4 ⓑ 4 : 1 ⓒ 3 : 1 ⓓ 1 : 3

**4** Which ratio of the following does not equal fourth?

ⓐ $\frac{4}{16}$ ⓑ $\frac{5}{20}$ ⓒ $\frac{7}{28}$ ⓓ $\frac{10}{45}$

**5** 77 : 49 = ......... : .........

ⓐ 7 : 11 ⓑ 7 : 1 ⓒ 11 : 7 ⓓ 11 : 1

**6** The ratio between two number is 2:5. If the first number becomes 8, then the second number will be ......................

ⓐ 8 ⓑ 10 ⓒ 15 ⓓ 20

**7** $\frac{6}{7}$ is equivalent to .............

ⓐ $\frac{7}{6}$ ⓑ $\frac{18}{14}$ ⓒ $\frac{42}{49}$ ⓓ $\frac{35}{30}$

**8** The total number of students in a class is 40 and the boys are 15, then the ratio between girls and boys is .............

ⓐ 3 : 8 ⓑ 3 : 5 ⓒ 5 : 8 ⓓ 5 : 3

**9** The ratio between two side lengths of rhombus is ...........

ⓐ 1 : 4 ⓑ 1 : 3 ⓒ 1 : 2 ⓓ 1 : 1

**10** If the ratio between two numbers is 3 : 5 and the smaller number is 12, then the greater number is ........

ⓐ 15 ⓑ 20 ⓒ 36 ⓓ 12

**11** Carpenter needs 30 $m^3$ to make 5 tables, then the rate of used wood = ....... $m^3$ /table.

ⓐ 6 ⓑ 3 ⓒ 5 ⓓ 150





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**12** If 4 : x = 12 : 18, then x = ......................

ⓐ 6 ⓑ 9 ⓒ 15 ⓓ 18

**13** If 8 : x = 0.5, then x = ......................

ⓐ 4 ⓑ 8 ⓒ 16 ⓓ 40

**14** $\frac{7}{.....} = \frac{28}{48}$

ⓐ 10 ⓑ 12 ⓒ 14 ⓓ 16

**15** Sandy reads 140 pages of stories weekly, then she reads ............ pages daily

ⓐ 20 ⓑ 7 ⓒ 14 ⓓ 70

**16** If 3 : x – 1 = 4 : 8 , then x = ..........

ⓐ 5 ⓑ 7 ⓒ 8 ⓓ 9

**17** If 3 : 5 = 12 : 2x, then x = .............

ⓐ 20 ⓑ 24 ⓒ 12 ⓓ 10

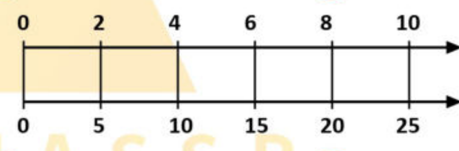
**18** .................. are two equivalent ratios

ⓐ $\frac{6}{7}, \frac{18}{14}$ ⓑ $\frac{2}{3}, \frac{8}{16}$ ⓒ $\frac{4}{5}, \frac{60}{75}$ ⓓ $\frac{1}{2}, \frac{2}{5}$

**19** If a : b and c : d are equivalent ratios then ..................

ⓐ a × b = c × d ⓑ a × c = b × d ⓒ a × d = b × c ⓓ a + d = b + c

**20** The ratio representing the opposite double line number is .................. .




ⓐ 2 : 3 ⓑ 3 : 5 ⓒ 2 : 5 ⓓ 2 : 7

**21** The ratio representing the opposite tape diagram is .................. .



ⓐ 3 : 4 ⓑ 4 : 3 ⓒ 7 : 3 ⓓ 4 : 7

**22** If x : 15 = 3 : 5, then x + 4 = ......................

ⓐ 8 ⓑ 9 ⓒ 5 ⓓ 13

**23** If $\frac{x+3}{14} = \frac{1}{2}$ , then x = ......................

ⓐ 14 ⓑ 7 ⓒ 4 ⓓ 3












**24** The second term in the ratio $\frac{7}{12}$ is .............

ⓐ 0 ⓑ 7 ⓒ 1 ⓓ 12

**25** An amount of food is distributed between two people in the ratio 3 : 4 then what the first person took = ..................... the total.

ⓐ $\frac{3}{4}$ ⓑ $\frac{3}{7}$ ⓒ $\frac{4}{7}$ ⓓ $\frac{4}{3}$

**26** A a water tap is leaking 240 litres of water in one hour, then the rate of leaking = ..................... L/min.

ⓐ 240 ⓑ 4 ⓒ 40 ⓓ 6

**27** 30 L.E for 5 kg, then the cost of 30 kg is ........... L.E

ⓐ 5 ⓑ 30 ⓒ 90 ⓓ 180

**28** To find the simplest form of the ratio 8 : 16, we divide the two terms by ...........

ⓐ 16 ⓑ 8 ⓒ 6 ⓓ 1

**29** Which pair shows equivalent ratios ?

ⓐ $\frac{3}{4}$, 16 to 20 ⓑ $\frac{25}{50}$, 1 : 2 ⓒ $\frac{4}{8}$ , $\frac{3}{9}$ ⓓ 1 : 3 , 3 : 6

**30** If the ratio between a and b is 1 : 3 and the sum of a and b is 20 ,then b = ............

ⓐ 16 ⓑ 4 ⓒ 15 ⓓ 80

**32** From the opposite equivalent ratios
A + B = ........

| 4 | 36 | B |
|---|---|---|
| 9 | A | 36 |



ⓐ 98 ⓑ 97 ⓒ 96 ⓓ 95

**33** The next ratio of 2 : 5 , 6 : 15 ,18 : 45 , ..............

ⓐ 54 : 135 ⓑ 54 : 90 ⓒ 36 : 90 ⓓ 54 : 180

**34** If 3 : 5 = 12 : 4 x, then x = ..........

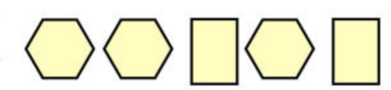
ⓐ 20 ⓑ 24 ⓒ 5 ⓓ 10

**35** A worker paints a wall with an area of 36 $m^2$ in 4 hours, then the rate of painting is ........................... $m^2$/hr.

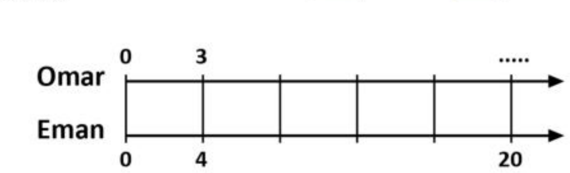
ⓐ 7 ⓑ 8 ⓒ 9 ⓓ 10

## Q2: Complete the following:

1. ............... it is a comparison between two quantities that have different units
2. 240 : 360 = .......... : ............ ( in the simplest form )
3. If $\frac{7}{k}$ equivalent to $\frac{1}{4}$ , then k = .........
4. Gehan bought 2 kg of apples for 120 L.E, then she paid .......... L.E to buy 4.5 kg
5. The ratio between the perimeter of equilateral triangle and its side length is ...... : .....
6. 4 : 7 = ............ : 42
7. If 6 : x = 10 : 32 , then x = .............
8. $\frac{3}{5} = \frac{....}{15} = \frac{27}{....} = \frac{....}{....}$
9. If 3 : 7 = x : 28, then x – 2 = ..........
10. If $\frac{x}{9} = \frac{4}{x}$ , then value of x = ..........
11. $\frac{x}{5}$ = 5, then x = ..........
12. x + 4 : 12 = 5 : 15, then the value of x = ...........
13. The ratio between side length of a square to its perimeter is .......... : .........
14. $\frac{y}{3}$ and 7 are two equivalent ratios, then y = ..........
15. In the ratio 9:5, the first term is .................... and the second term is .................... ..
16. A ship covered 360 km in 4 hours, then the speed of the ship is ............. km/hr.
17. In the opposite figure, the ratio between the number of hexagon to the number of rectangles is ........... : ...........



18. From the opposite double number line, if the ratio between what Omar saved to what Eman saved was 3 : 4 if Eman saved 20 L.E. then Omar saved ................ L.E



## Q3: Answer the following:

**1** Marwan has 980 LE. He spends 420 LE. Complete:

a] The money that he spends : the total money = ......... : .........

b] The money that he saves : the money that he spends = .......... : .........

**2** A car consumed 640 liters of gasoline in 4 months. How many liters did the car consume on average in one month?

.....................................................................................................................

**3** If Murad has 40 L.E. and Ahmed has 32 L.E. Find.

The ratio between what Murad has and the total sum of money in simplest form.

.....................................................................................................................

**4** If 100 grams of chocolate give 300 calories, if we had only 40 grams of chocolate, so how many calories would we get?

.....................................................................................................................

**5** The number of students in a school is 540, if the number of boys in this school is 300, Find: The ratio between the number of boys and the number of girls.

.....................................................................................................................

**6** Sandy uploads videos into YouTube, if the video takes 15 minutes:

A] How many videos will be uploaded in 375 minutes?

B] How long will Sandy take to upload 4 videos to YouTube?

.....................................................................................................................



**7** Complete the following ratio tables:

A]

| 3 | ........ | 15 | ....... | 96 |
|---|---|---|---|---|
| ........ | 3 | 5 | 9 | ....... |

**8** Which is better to buy:

8 cans of green beans of 36 LE or 13 cans of green beans of 55.25 LE?.

.....................................................................................................................

NOTE where all cans are same kind














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Choose the correct answer.

1) $4 \div \frac{2}{4} =$ ........

A. $\frac{2}{4}$ B. $\frac{4}{2}$ C. 4 D. 8

2) $\frac{3}{7}$ of $\frac{7}{3} =$ ..........

A. $\frac{37}{73}$ B. 1 C. $\frac{3}{7}$ D. $\frac{7}{3}$

3) $\frac{2}{3} \div \frac{1}{3}$ $\square$ $\frac{1}{2}$

A. $<$ B. $>$ C. $=$



4) ........ $\div \frac{3}{8} = \frac{5}{6}$

A. $\frac{5}{16}$ B. $\frac{1}{2}$ C. $\frac{15}{16}$ D. $\frac{9}{20}$

5) Half of $\frac{4}{7}$ is ......

A. $\frac{4}{2}$ B. $\frac{7}{2}$ C. $\frac{4}{14}$ D. $\frac{8}{7}$

6) $34.25 \div 0.25 =$ ........ $\div 25$

A. 34.25 B. 342.5 C. 3425 D. 3.425

7) $\frac{1}{4} \div \frac{1}{2}$ $\square$ $\frac{1}{8}$

A. $<$ B. $>$ C. $=$

8) ........ $\times \frac{3}{8} = \frac{5}{6}$

A. $\frac{9}{20}$ B. $\frac{20}{9}$ C. $\frac{8}{16}$ D. $\frac{5}{16}$

9) The simplest from of the ratio 15:18 is ........

A. 5:8 B. 1:1 C. 5:6 D. 8:5

Choose the correct answer.

10) $\frac{4}{7}$ of 21 = .........

A. 4 B. 7 C. 14 D. 12

11) Which of the following comparisons is showing a ratio?

A. Six children like swimming than volleyball
B. Three more than childrenlike volleyball than swimming
C. Fewer children like swimming than volleyball
D. For every six children like volleyball, three children like swimming

12) $\frac{3}{5} \div 3$ ☐ $\frac{1}{5}$

A. < B. > C. =

13) 5.4 x 0.02 = ................

A. 10.8 B. 1.08 C. 0.108 D. 0.0108

14) Form the figure , AC : FC =...........

A B C D E F

A. 3 : 2 B. 2 :3 C. 2 : 4 D. 3 : 4

15) The simplest form of the ratio 550 to 770 is...........

A. 5 : 7 B. $\frac{55}{77}$ C. 55 to 70 D. 7 to 5

16) $\frac{3}{4} \div \frac{1}{2}$ ☐ $\frac{1}{2}$

A. > B. = C. <

Choose the correct answer.

17. If the ratio between a and b is 3 : 8 , and b is 16 ,then a = ........

A. 11 B. 5 C. 6 D. 8

18. From the opposite equivalent ratios , x+y=.......

A. 20 B. 35
C. 26 D. 14

| 3 | 12 | x |
|---|---|---|
| 5 | y | 10 |

19. $\frac{3}{4}$ x............ = $\frac{3}{2}$

A. $\frac{1}{2}$ B. $\frac{1}{4}$ C. 2 D. $\frac{3}{4}$

20. The simplest form of 14 :28 is .........

A. 1 to 2 B. 4 : 8 C. $\frac{2}{1}$ D. $\frac{1}{7}$

21. $\frac{7}{4} \div \frac{3}{4}$ =...........

A. $\frac{3}{7}$ B. $2\frac{1}{3}$ C. $\frac{4}{7}$ D. $\frac{4}{3}$

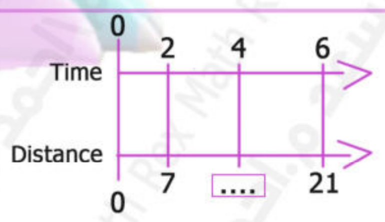
22. The product of any number by its reciprocal equals

A. 1 B. $\frac{5}{3}$ C. Zero D. $\frac{3}{5}$

23. The product of extremes ☐ the product of means

A. > B. = C. < D. ≠

24. The missing number in the opposite double number line is............




A. 9 B. 17 C. 14 D. 11

Choose the correct answer.

25. $\ldots\ldots \div \frac{3}{4} = 3$

A. $\frac{21}{2}$ B. $\frac{9}{4}$ C. $\frac{7}{2}$ D. $\frac{6}{7}$

26. From the opposite tape diagram, if the sum of boys and girls is 35 , then each box equals .........

Boys: 3 boxes
Girls: 2 boxes

A.3 B.2 C.5 D.7

27. If $\frac{5}{7} = \frac{x}{28}$ ,then x = ..........

A.4 B.20 C.9 D.26

28. 0.2 x 0.5 =..........

A. 0.10 B. 0.01 C.1 D. 1.10

29. If 111 x 23 =2553 , then1.11 x 2.3 = ..........

A. 255.3 B. 25.53 C. 2.553 D. 0.2553

30. $\frac{1}{6} \div \frac{1}{3}$ ☐ $\frac{1}{3}$

A. < B. > C. =

31. 0.453 x 0.1 =..........

A. 0.0543 B. 4.53 C. 0.0453 D. 0.453

32. Which is the following comparisons is showing a ratio ?

A. Four out of thirteen students like drama.
B. Fewer students like drama than advanture.
C. Five more students prefer fantasty than prefer drama.
D. Four more students like art than math.

Choose the correct answer.

33 Which ratio is equivalent to 75:100 ?

A. $\frac{7.5}{1}$ B. 100:75 C. 140:200 D. 3 to 4

34 From the opposite equivalent ratios ,A + B =............

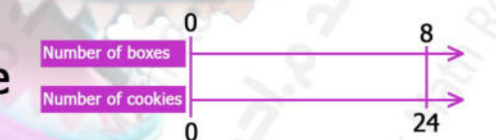
| 4 | 36 | B |
|---|---|---|
| 9 | A | 36 |

A.98 B.97 C.96 D.95

35 If 24 x 96 =2304 ,then 2304 ÷ 9.6 = ..........

A.24 B.2.4 C. 0.24 D.240

36 There are 24 cookies in 8 boxes ,then the number of cookies in 3 boxes using double number line is ..............




A. 3 B. 9 C. 12 D. 18

37 If the ratio brtween a and b is 1:3 and the sum of a and b is 20 ,then b = ..........

A. 16 B. 4 C. 15 D. 80

38 54 L.E for 9 kg , then the cost of 6 kg is ..........

A. 36 B. 9 C. 27 D. 45

39 Which ratio means the same thing as 1:4 ?

A.4 through 1 B. 1 to 1 C. $\frac{4}{1}$ D. 1 to 4

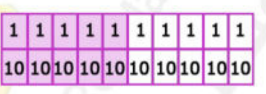
40 The next ratio 3:6 , 6:12 , 12:24 , .............

A. 24:48 B. 36:72 C. 24:27 D. 12:48

Choose the correct answer.

**41** You can use the opposite model to solve the problem .........

$\frac{1}{2}$



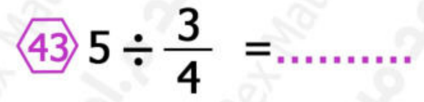

A. $\frac{1}{10} \div \frac{1}{2}$ B. $\frac{1}{10} \div 5$ C. $\frac{1}{2} \div 5$ D. $\frac{1}{2} \div 10$

---

**42** 
$.......... \times \frac{3}{4} = 1$

A. $1\frac{1}{3}$ B. $\frac{4}{1}$ C. $\frac{3}{4}$ D. $\frac{1}{3}$

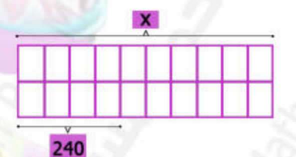
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**43** 
$5 \div \frac{3}{4} = ..........$

A. $1\frac{1}{3}$ B. $6\frac{4}{1}$ C. $6\frac{2}{3}$ D. $5\frac{1}{3}$

---

**44** From the opposite tape digram, x = ..........




A. 60 B. 240 C. 400 D. 600

---

**45** The reciprocal of 5 is ..........

A. 0 B. 5 C. $\frac{1}{5}$ D. -5

---

**46** The ratio between two side lengths of square is ....... : ........

A. 1:4 B. 2:4 C. 1:2 D. 1:1

---

**47** $465.3 \div 0.25$ ☐ $4653 \div 2.3$

A. $<$ B. $>$ C. $=$

---

**48** Which of following ratios is not equivalent to $\frac{32}{64}$ ?

A. $\frac{16}{32}$ B. 18:34 C. $\frac{14}{28}$ D. 5 to 10

1. $8 \div \frac{5}{6} =$ ........

2. 3.8 x 2.5=...........

3. If 10.35 ÷ 2.3 = 4.5 , then 23 x 4.5 =..........

4. The first term in the ratio 4 : 7 is ...........

5. The simplest form of the ratio 12 to 20 is ...........

6. 4.8 ÷ 0.16 =.............

7. The rate is ...........

8. If the ratio $\frac{7}{8}$ is equivalent to 14 : x, then x - 2=.........

9. ............... $\div \frac{2}{7} = \frac{1}{2}$

10. If the ratio $\frac{1}{2}$ is equivalent to $\frac{12}{x - 1}$ , then x=.........

11. 100 : 150 = ......... : .......... { in the simplest form}

12. The number .................. has no reciprocal

13. 2.5 x 3.4 = 25 x .......

14. If $\frac{5}{x} = \frac{15}{12}$ , then 2 x =.........

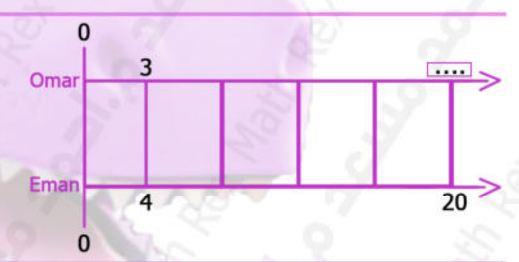
15. ........ $\times \frac{2}{7} = 1$

16. If $\frac{3}{4} = \frac{12}{x}$ ,then x+4=.........

17. If $\frac{8}{X}$ is equivalent to $\frac{1}{2}$ , then x=.........

18. ........ $\times \frac{2}{7} = \frac{4}{21}$

19. From the opposite double number line , if the ratio between what Omar saved to what Eman saved 3:4 if Eman saved 20 L.E., then Omar saved ............. L.E




20. From the opposite model, $2 \div \frac{1}{2}$ =.......

| 1 | | 1 | |
|---|---|---|---|
| $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ |

21. The reciprocal of $\frac{4}{9}$ is........

22. 2.32 ÷ 0.4 = .......... ÷ 4

23. If $\frac{x}{y} = \frac{z}{L}$ , then x ×......=z × ......

24. 240 : 300 = ......... : ..........   { in the simplest form}

25. The ratio between side length of square and its perimeter=.........

26. ........ $\div \frac{2}{7} = 3$

27. From the opposite model, $3 \div \frac{2}{3}$ =.......

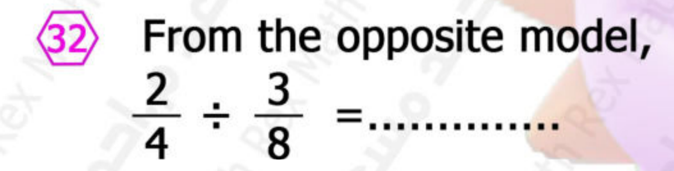
28. If $\frac{x+2}{5} = \frac{28}{35}$ , then x=.........

29. $\frac{X}{32} = \frac{9}{36}$ , then x=........

30. $\frac{5}{6}$ ÷............= 5

31. $\frac{2}{3}$ of 12 =.........

32. From the opposite model,
$\frac{2}{4} \div \frac{3}{8}$ =............



| $\frac{1}{4}$ | | $\frac{1}{4}$ | | $\frac{1}{4}$ | | $\frac{1}{4}$ | |
|---|---|---|---|---|---|---|---|
| $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |

## Answer the Following questions

1. If Wael has 40 L.E and Ahmed has 32 L.E. find the ratio between what Wael has and the total sum of money in simplest form.

..........................................................................................

2. Laila has 6 liters of milk.She needs to divide it into small bottles of $\frac{3}{4}$ liters each.How many bottles will she need?

..........................................................................................

3. A runner covers 24 Kilometers in 6 hours.
Find the distance he covers in 4 hours at the same speed.

..........................................................................................

4. If 437.5 L.E. is distributed among the excellent pupils and each of them takes 17.5 L.E. Find the number of excellent pupils

..............................................................................................

5. The total number of boys and girls in school is 540, if the number of boys in this school is 300,
Find the ratio between the number of boys and number of girls

..............................................................................................

6. Two machines produce cloth, the first one produces 365 meters in 5 hours and the second produces 480 meters in 6 hours.
Which machine is better?

..............................................................................................

7. If the price of 15 pencils of the same kind is 112.5L.E
Find the price of each pencil.

..............................................................................................

8. A box of table tennis balls weighs $\frac{10}{18}$ of a kg. If each ball weighs $\frac{5}{27}$ of a kg, then how many balls are there in the box?

..............................................................................................

9. If the price of one meter of cloth is 25.4 L.E.
Find the price of 2.5 meter.

..............................................................................................

10 Find the missing numbers in the ratio taple.

| Kg | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| L.E. | ..... | ..... | ..... | 200 |

11 Find the value of x in the following.

$\frac{x - 1}{5} = \frac{20}{25}$

..............................................................................................

12 Find the value of x in the following.

$\frac{4}{7} = \frac{x + 3}{28}$

..............................................................................................

13 If the ratio between oranges and bananas is 3:4
and the number of bananas is 24
,then the difference between them is...........

14 $332.2 \div 0.11 =$..........



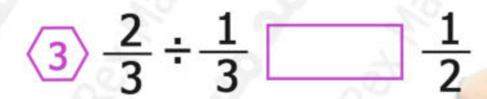
## Choose the correct answer.

1) $4 \div \frac{2}{4} = \dots\dots$

A. $\frac{2}{4}$ B. $\frac{4}{2}$ C. 4 D. 8

2) $\frac{3}{7}$ of $\frac{7}{3} = \dots\dots$

A. $\frac{37}{73}$ B. 1 C. $\frac{3}{7}$ D. $\frac{7}{3}$

3) 
$\frac{2}{3} \div \frac{1}{3} \;\square\; \frac{1}{2}$

A. < B. > C. =

4) 
$\dots\dots \div \frac{3}{8} = \frac{5}{6}$

A. $\frac{5}{16}$ B. $\frac{1}{2}$ C. $\frac{15}{16}$ D. $\frac{9}{20}$

5) Half of $\frac{4}{7}$ is ......

A. $\frac{4}{2}$ B. $\frac{7}{2}$ C. $\frac{4}{14}$ D. $\frac{8}{7}$

6) $34.25 \div 0.25 = \dots\dots \div 25$

A. 34.25 B. 342.5 C. 3425 D. 3.425

7) $\frac{1}{4} \div \frac{1}{2} \;\square\; \frac{1}{8}$

A. < B. > C. =

8) $\dots\dots \times \frac{3}{8} = \frac{5}{6}$

A. $\frac{9}{20}$ B. $\frac{20}{9}$ C. $\frac{8}{16}$ D. $\frac{5}{16}$

9) The simplest from of the ratio 15:18 is ........

A. 5:8 B. 1:1 C. 5:6 D. 8:5

Choose the correct answer.

10. $\frac{4}{7}$ of 21 = .........

A. 4 B. 7 C. 14 D. 12

11. Which of the following comparisons is showing a ratio?

A. Six children like swimming than volleyball
B. Three more than childrenlike volleyball than swimming
C. Fewer children like swimming than volleyball
D. For every six children like volleyball, three children like swimming

12. 

$\frac{3}{5} \div 3$ ☐ $\frac{1}{5}$

A. < B. > C. =

13. 5.4 x 0.02 = ................

A. 10.8 B. 1.08 C. 0.108 D. 0.0108

14. Form the figure , AC : FC =..........

A B C D E F

A. 3 : 2 B. 2 :3 C. 2 : 4 D. 3 : 4

15. The simplest form of the ratio 550 to 770 is..........

A. 5 : 7 B. $\frac{55}{77}$ C. 55 to 70 D. 7 to 5

16. $\frac{3}{4} \div \frac{1}{2}$ ☐ $\frac{1}{2}$

A. > B. = C. <

Choose the correct answer.

17. If the ratio between a and b is 3 : 8 , and b is 16 ,then a = ........

A. 11 B.5 C.6 D.8

18. From the opposite equivalent ratios , x+y=.......

| 3 | 12 | x |
|---|---|---|
| 5 | y | 10 |

A.20 B.35 C.26 D.14

19. $\frac{3}{4}$ x............ = $\frac{3}{2}$

A. $\frac{1}{2}$ B. $\frac{1}{4}$ C. 2 D. $\frac{3}{4}$

20. The simplest form of 14 :28 is .........

A. 1 to 2 B. 4 : 8 C. $\frac{2}{1}$ D. $\frac{1}{7}$

21. $\frac{7}{4} \div \frac{3}{4}$ =...........

A. $\frac{3}{7}$ B. $2\frac{1}{3}$ C. $\frac{4}{7}$ D. $\frac{4}{3}$

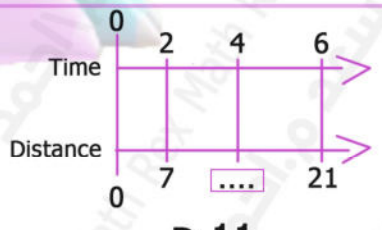
22. The product of any number by its reciprocal equals

A. 1 B. $\frac{5}{3}$ C. Zero D. $\frac{3}{5}$

23. The product of extremes ☐ the product of means

A. > B. = C. < D. ≠

24. The missing number in the opposite double number line is............




A. 9 B.17 C.14 D.11

Choose the correct answer.

25) ........ $\div \frac{3}{4} = 3$

A. $\frac{21}{2}$ B. $\frac{9}{4}$ C. $\frac{7}{2}$ D. $\frac{6}{7}$

26) From the opposite tape diagram, if the sum of boys and girls is 35 , then each box equals .........




A.3 B.2 C.5 D.7

27) If $\frac{5}{7} = \frac{x}{28}$ ,then x = ..........

A.4 B.20 C.9 D.26

28) 0.2 x 0.5 =..........

A. 0.10 B. 0.01 C.1 D. 1.10

29) If 111 x 23 =2553 , then1.11 x 2.3 = ..........

A. 255.3 B. 25.53 C. 2.553 D. 0.2553

30) $\frac{1}{6} \div \frac{1}{3}$ ☐ $\frac{1}{3}$

A. < B. > C. =

31) 0.453 x 0.1 =..........

A. 0.0543 B. 4.53 C. 0.0453 D. 0.453

32) Which is the following comparisons is showing a ratio ?

A. Four out of thirteen students like drama.
B. Fewer students like drama than advanture.
C. Five more students prefer fantasty than prefer drama.
D. Four more students like art than math.

Choose the correct answer.

33 Which ratio is equivalent to 75:100 ?

A. $\frac{7.5}{1}$ B. 100:75 C. 140:200 D. 3 to 4

34 From the opposite equivalent ratios ,A + B =............

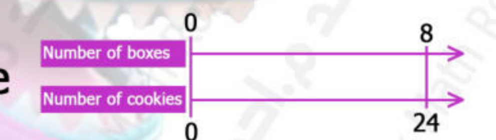
| 4 | 36 | B |
|---|---|---|
| 9 | A | 36 |

A.98 B.97 C.96 D.95

35 If 24 x 96 =2304 ,then 2304 ÷ 9.6 = ..........

A.24 B.2.4 C. 0.24 D.240

36 There are 24 cookies in 8 boxes ,then the number of cookies in 3 boxes using double number line is ..............




A. 3 B. 9 C. 12 D. 18

37 If the ratio brtween a and b is 1:3 and the sum of a and b is 20 ,then b = ..........

A. 16 B. 4 C. 15 D. 80

38 54 L.E for 9 kg , then the cost of 6 kg is ..........

A. 36 B. 9 C. 27 D. 45

39 Which ratio means the same thing as 1:4 ?

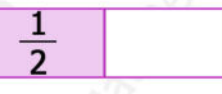
A.4 through 1 B. 1 to 1 C. $\frac{4}{1}$ D. 1 to 4

40 The next ratio 3:6 , 6:12 , 12:24 , .............

A. 24:48 B. 36:72 C. 24:27 D. 12:48

## Choose the correct answer.

**41** You can use the opposite model to solve the problem .........







A. $\frac{1}{10} \div \frac{1}{2}$  B. $\frac{1}{10} \div 5$  C. $\frac{1}{2} \div 5$  D. $\frac{1}{2} \div 10$

---

**42**  .......... $\times \frac{3}{4} = 1$

A. $1\frac{1}{3}$  B. $\frac{4}{1}$  C. $\frac{3}{4}$  D. $\frac{1}{3}$

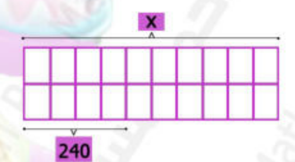
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**43** $5 \div \frac{3}{4}$ = ..........

A. $1\frac{1}{3}$  B. $6\frac{4}{1}$  C. $6\frac{2}{3}$  D. $5\frac{1}{3}$

---

**44** From the opposite tape digram,
x = ..........




A. 60  B. 240  C. 400  D. 600

---

**45** The reciprocal of 5 is ..........

A. 0  B. 5  C. $\frac{1}{5}$  D. -5

---

**46** The ratio between two side lengths of square is ....... : ........

A. 1:4  B. 2:4  C. 1:2  D. 1:1

---

**47** 465.3 ÷ 0.25 ☐ 4653 ÷ 2.3

A. <  B. >  C. =

---

**48** Which of following ratios is not equivalent to $\frac{32}{64}$ ?

A. $\frac{16}{32}$  B. 18:34  C. $\frac{14}{28}$  D. 5 to 10

1. $8 \div \frac{5}{6} = $ ...$9\frac{3}{5}$...

2. 3.8 x 2.5=...9.5...

3. If 10.35 ÷ 2.3 = 4.5 , then 23 x 4.5 =...103.5...

4. The first term in the ratio 4 : 7 is ...4.....

5. The simplest form of the ratio 12 to 20 is ...3 : 5..

6. 4.8 ÷ 0.16 =...30........

7. The rate is ............ a ratio that compares two quantities in different units of measure.

8. If the ratio $\frac{7}{8}$ is equivalent to 14 : x, then x - 2=...14....

9. ...$\frac{1}{7}$... $\div \frac{2}{7} = \frac{1}{2}$

10. If the ratio $\frac{1}{2}$ is equivalent to $\frac{12}{x - 1}$ , then x=...25...

11. 100 : 150 = ...2... : ...3..... { in the simplest form}

12. The number ...Zero........ has no reciprocal

13. 2.5 x 3.4 = 25 x ...0.34

14. If $\frac{5}{x} = \frac{15}{12}$ , then 2 x =...8....

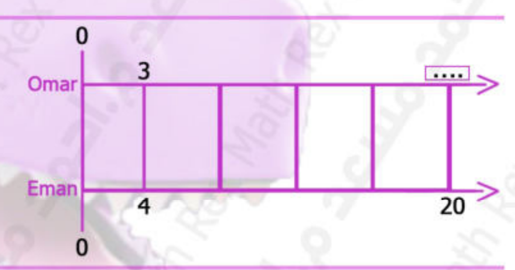
15. $\frac{7}{2} \times \frac{2}{7} = 1$

16. If $\frac{3}{4} = \frac{12}{x}$ ,then x+4=...20...

17. If $\frac{8}{X}$ is equivalent to $\frac{1}{2}$ , then x=...16...

18. $\frac{2}{3} \times \frac{2}{7} = \frac{4}{21}$

19. From the opposite double number line, if the ratio between what Omar saved to what Eman saved 3:4 if Eman saved 20 L.E., then Omar saved ...15... L.E




20. From the opposite model, $2 \div \frac{1}{2}$ =...4...

| 1 | | 1 | |
|---|---|---|---|
| $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ |

21. The reciprocal of $\frac{4}{9}$ is... $\frac{9}{4}$

22. 2.32 ÷ 0.4 = ...23.2... ÷ 4

23. If $\frac{x}{y} = \frac{z}{L}$ , then x ×...L...=z × ...y...

24. 240 : 300 = ...4... : ...5... { in the simplest form}

25. The ratio between side length of square and its perimeter=...1 : 4...

26. $\frac{6}{7} \div \frac{2}{7} = 3$

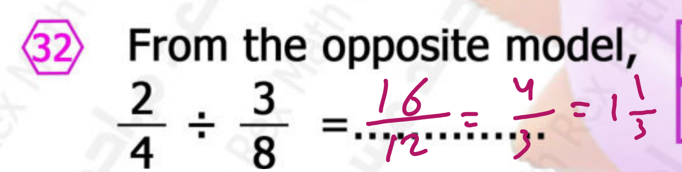
27. From the opposite model, $3 \div \frac{2}{3}$ =... $\frac{9}{2}$ ... $= 4\frac{1}{2}$

28. If $\frac{x+2}{5} = \frac{28}{35}$ , then x=..2.....

29. $\frac{X}{32} = \frac{9}{36}$ , then x=....8.

30. $\frac{5}{6}$ ÷....$\frac{1}{8}$.....= 5

31. $\frac{2}{3}$ of 12 =....8...



32. From the opposite model,
$\frac{2}{4} \div \frac{3}{8}$ =.....$\frac{16}{12} = \frac{4}{3} = 1\frac{1}{3}$.....

| $\frac{1}{4}$ | | $\frac{1}{4}$ | | $\frac{1}{4}$ | | $\frac{1}{4}$ | |
|---|---|---|---|---|---|---|---|
| $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |

## Answer the Following questions

1. If Wael has 40 L.E and Ahmed has 32 L.E. find the ratio between what Wael has and the total sum of money in simplest form.

wael : Ahmed : sum
40 : 32 : 72 ÷8
5 : 4 : 9

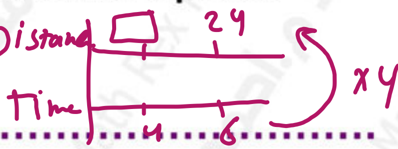
w : total
5 : 9

2. Laila has 6 liters of milk.She needs to divide it into small bottles of $\frac{3}{4}$ liters each.How many bottles will she need?

$6 \div \frac{3}{4} = 6 \times \frac{4}{3} = 8$ bottles

3. A runner covers 24 Kilometers in 6 hours.
Find the distance he covers in 4 hours at the same speed.

the distance in 4 hours = 4 × 4 = 16 km



4. If 437.5 L.E. is distributed among the excellent pupils and each of them takes 17.5 L.E. Find the number of excellent pupils

437.5 ÷ 17.5 = 25 pupils

5. The total number of boys and girls in school is 540, if the number of boys in this school is 300, Find the ratio between the number of boys and number of girls 5:4

the number of girls = 540 − 300 = 240

Boys : Girls
300 : 240 ÷ 10
30 : 24 ÷ 6
B : G
5 : 4

6. Two machines produce cloth, the first one produces 365 meters in 5 hours and the second produces 480 meters in 6 hours. Which machine is better?

unit rate of 1st machine = $\frac{365 \text{ m}}{5 \text{ hr}}$ = 73 m/hr
unite rate of 2nd machine = $\frac{480}{6}$ = 80 m/hr
then the 2nd machine is better

7. If the price of 15 pencils of the same kind is 112.5L.E Find the price of each pencil.

= 112.5 ÷ 15 = 7.5 L.E

8. A box of table tennis balls weighs $\frac{10}{18}$ of a kg. If each ball weighs $\frac{5}{27}$ of a kg, then how many balls are there in the box?

$\frac{10}{18} \div \frac{5}{27} = \frac{10}{18} \times \frac{27}{5} = \frac{6}{2}$ = 3 balls

9. If the price of one meter of cloth is 25.4 L.E. Find the price of 2.5 meter.

25.4 × 2.5 = 63.5 L.E

(10) Find the missing numbers in the ratio taple.

| Kg | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| L.E. | 50 | 100 | 150 | 200 |

×50

(11) Find the value of x in the following.

$$\frac{x-1}{5} = \frac{20}{25}$$

×5 ×5

$x - 1 = 4$

$x = 5$

(12) Find the value of x in the following.

$$\frac{4}{7} = \frac{x+3}{28}$$

×4 ×4

$x + 3 = 16$

$x = 13$

(13) If the ratio between oranges and bananas is 3:4 and the number of bananas is 24 ,then the difference between them is 24 − 18 = 6

O : B
3 : 4 ×6
18 : 24

(14) 332.2 ÷ 0.11 = 3020



## Choose the correct answer



1. $\frac{2}{7} \times \dots\dots\dots\dots\dots\dots. = 1$

   (A) $\frac{2}{7}$ (B) zero (C) $\frac{7}{2}$ (D) 1

2. $5 \div \frac{1}{3} = \cdots \dots\dots\dots\dots$

   (A) $\frac{5}{3}$ (B) $\frac{3}{5}$ (C) $5\frac{1}{3}$ (D) 15

3. $2.1 \times 0.3 = \cdots \dots\dots\dots.$

   (A) 6.3 (B) 0.63 (C) 63 (D) 0.063

4. if $15.25 \div 0.25 = 61$, then $1.525 \div 0.025 = \cdots \dots\dots\dots\dots\dots$

   (A) 61 (B) 610 (C) 6.1 (D) 0.61

5. $\frac{2}{3} \div \frac{2}{5} = \cdots \dots\dots\dots.$

   (A) $\frac{4}{15}$ (B) $1\frac{2}{3}$ (C) $\frac{15}{4}$ (D) $\frac{1}{15}$

6. $\frac{3}{4} \div 2 = \cdots \dots\dots\dots\dots.$

   (A) $\frac{3}{8}$ (B) $\frac{6}{4}$ (C) $\frac{4}{6}$ (D) $\frac{3}{2}$

7. $\frac{1}{3} \div \frac{1}{2}$ ☐ $\frac{2}{5}$

   (A) < (B) = (C) >

8. by using the opposite model

   what is the quotient of $3 \div \frac{2}{3}$ ?

| 1 | | | 1 | | | 1 | | |
|---|---|---|---|---|---|---|---|---|
| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |

   (A) 2 (B) $\frac{3}{2}$ (C) $4\frac{1}{2}$ (D) $\frac{2}{3}$




9) you can use the opposite model to solve the proplem ... ... ....

| $\frac{1}{2}$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ |

A) $\frac{1}{10} \div \frac{1}{2}$  B) $\frac{1}{10} \div 5$

C) $\frac{1}{2} \div 5$  D) $\frac{1}{2} \div 10$

10) $\dots\dots\dots\dots\dots\dots\dots \div \frac{1}{4} = 1$

A) $\frac{1}{4}$  B) $0.4$  C) $1$  D) $4$

11) $\frac{2}{3}$ of $27 = \cdots\dots\dots$

A) $3630$  B) $363$  C) $36.2$  D) $3.63$

12) $0.33 \div 0.011 = \cdots\dots\dots\dots\dots\dots \div 11$

A) $33$  B) $330$  C) $3300$  D) $0.33$

13) $\frac{2}{5} \div \frac{1}{5}$ ☐ $\frac{3}{4} \div \frac{1}{4}$

$<$  $=$  $>$

14) $25 : 50 = \cdots\dots\dots\dots$

A) $10 : 5$  B) $1 : 2$  C) $2 : 1$  D) $5 : 1$

15) if $\frac{3}{4} = \frac{x}{28}$ , then $x = \cdots\dots\dots\dots$

A) $7$  B) $12$  C) $21$  D) $24$

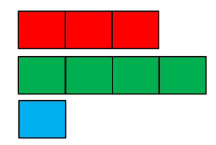
16) the tape diagram represent the ratio ... ... ... ...

A) $5 : 2$  B) $3 : 2$  C) $7 : 2$  D) $2 : 3$

17) which of the following is equivalent to $\frac{8}{12}$ ?

A) $\frac{10}{15}$  B) $\frac{3}{4}$  C) $\frac{3}{3}$  D) $\frac{1}{2}$

18) in the opposite figure , the ratio between number of red squares and number of green squares $= \cdots\dots\dots\dots\dots\dots$





A) $3 : 8$  B) $4 : 3$  C) $3 : 5$  D) $3 : 4$




19. the second term in the ratio $\frac{7}{9}$ is … … …

Ⓐ 7 Ⓑ 9 Ⓒ 16 Ⓓ 2

20. which of the following is NOT equivalent to $\frac{14}{21}$

Ⓐ $\frac{2}{3}$ Ⓑ $\frac{16}{24}$ Ⓒ $\frac{18}{27}$ Ⓓ $\frac{4}{2}$

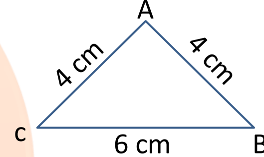
21. if $\frac{6}{x} = \frac{36}{42}$ , then $x = \cdots$ … … … … ..

Ⓐ 6 Ⓑ 7 Ⓒ 14 Ⓓ 21

22. in the opposite tape diagrams . if the number of boys is 20 , then the number of girls $= \cdots$ … …

Ⓐ 16 Ⓑ 20

Ⓒ 24 Ⓓ 30




23. in the opposite figure : . .

the ratio between length of $\overline{AB}$ and perimeter of Δ ABC is … … … … … … . : … … … … … … … ..

Ⓐ 1 : 10 Ⓑ 2 : 3

Ⓒ 6 : 8 Ⓓ 2 : 7

A
4 cm
4 cm
c
6 cm
B

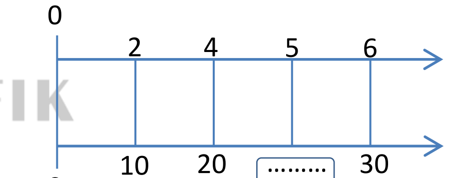
24. if the ratio between two numbers is 3 : 7 and sum of two numbers is 60 then the greater number is … … … … ….

Ⓐ 18 Ⓑ 6 Ⓒ 42 Ⓓ 49

25. the missing number in the following double number line is … … … … ..

Ⓐ 10 Ⓑ 15

Ⓒ 20 Ⓓ 25




26. which of the following are equivalent ?

Ⓐ $\frac{18}{20}, \frac{27}{30}, \frac{1}{3}$ Ⓑ $\frac{18}{20}, \frac{9}{10}, \frac{27}{30}$ Ⓒ $\frac{9}{10}, \frac{16}{20}, \frac{36}{40}$ Ⓓ $\frac{2}{9}, \frac{4}{18}, \frac{8}{27}$

27. if ratio between number of boys and girls is 3 : 5 then the ratio between girls to total number is … … … … … : … … … … … ..

Ⓐ 3 : 5 Ⓑ 3 : 8 Ⓒ 5 : 8 Ⓓ 5 : 3

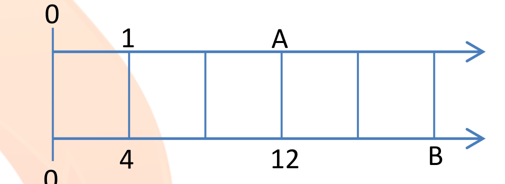



## complete



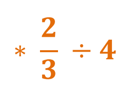
- if $31 \times 25 = 775$ , then $0.31 \times 2.5 = \cdots$ … … … .
- $\frac{4}{13} \div \frac{1}{13} = \cdots$ … … … … … … …
- $5 \div \frac{2}{3} = \cdots$ … … … ….
- fifth of $15 = \cdots$ … … … …
- $7.23 \div 0.1 = \cdots$ … … …
- … … … … … $\times \frac{3}{4} = \frac{1}{2}$
- $\frac{3}{10} \div 3 = \cdots$ … … ..
- $3.4 \times 0.27 = \cdots$ … … ….

- the ratio between two quantities with different units is called … … … …
- if $\frac{x}{y} = \frac{z}{l}$ , then $x \times$ … … … … $= z \times$ … … … … ….
- if $\frac{35}{50} = \frac{x+2}{10}$ , then $x =$ … … … … … … … … … … .
- ali bought 2 kg of apples for 100 L.E then the price of 6 kg of apples $= \cdots$ … … … L.E
- in the opposite double number line ,




A $= \cdots$ … … .  B $= \cdots$ … ….

- $\frac{8}{17} = \frac{16}{\ldots\ldots}$



- the next ratio of 3 : 4 , 6 : 8 , 9 : 12 , … … … … … : … … … … … ….
- if the ratio between number of dogs and number of cats is 3 : 7 if the number of cats is 21

  the number of dogs is … … … … ..

**Answer the following**

- by using the modeling division find the quotent .

  * $\frac{2}{3} \div 4$  * $\frac{3}{4} \div \frac{2}{5}$

……………………………………………………………………………………………………………………

……………………………………………………………………………………………………………………

……………………………………………………………………………………………………………………

- baher covered $\frac{2}{3}$ km in 5 min. what is the distance covered in

  one min. ?




Find



$4.2 \div 0.06$ $1.2 \times 0.37$

..........................................................................................................................................

$\frac{2}{3}$ of $\frac{3}{2}$ $5 \div \frac{5}{9}$

..........................................................................................................................................

- if the price of one meter of cloth is $9.8$ L. E , what is the cost of $1.5$ meters of cloth ?

..........................................................................................................................................

- in a juice shop 3 kilograms od strawberry were squeezed to provide 9 cups of juice to customers . if 6 kilo grams were squeezed , how many cups can be served to customers .
- show which of the following ratios are equivalent or not equivalent

$* \ \frac{20}{24}, \frac{18}{27}$ $* \ \frac{36}{18}, \frac{48}{24}$

- find each ratio in simplest form

$* \ 49 : 56$ $* \ 24 : 30$

- the following table shows the covered distance of cat in meters and the time taken in seconds . represent this data by double number line and find the value of A and B

| Distance In meters | 2 | 4 | A | B |
|---|---|---|---|---|
| Time In seconds | 4 | 8 | 12 | B |

0

0




## Choose the correct answer



1) $\dots\dots\dots\dots\dots\dots \times \frac{4}{5} = 1$

Ⓐ $\frac{4}{5}$ Ⓑ $\frac{5}{4}$ Ⓒ $1$ Ⓓ $0.5$

2) $\dots\dots\dots\dots\dots\dots \div \frac{3}{8} = \frac{5}{6}$

Ⓐ $\frac{5}{16}$ Ⓑ $\frac{1}{2}$ Ⓒ $\frac{15}{16}$ Ⓓ $\frac{9}{20}$

3) mona uses $\frac{6}{8}$ cup of flour to make 2 cupcakes . how much flour is used to make 1 cupcake ?

Ⓐ $\frac{12}{8}$ Ⓑ $\frac{3}{8}$ Ⓒ $\frac{2}{8}$ Ⓓ $\frac{1}{8}$

4) from the opposite model . $2 \div \frac{3}{4} = \dots\dots\dots\dots\dots\dots$

Ⓐ $2\frac{2}{4}$ Ⓑ $\frac{2}{4}$ Ⓒ $2\frac{2}{3}$ Ⓓ $\frac{3}{2}$

5) from the opposite model , $3 \div \frac{1}{3} = \dots\dots\dots$

Ⓐ $\frac{1}{9}$ Ⓑ $9$

Ⓐ $3$ Ⓑ $\frac{9}{9}$

| 1 | | | 1 | | | 1 | | |
|---|---|---|---|---|---|---|---|---|
| $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$ |



6) $\frac{3}{7}$ of $\frac{7}{3} = \dots\dots\dots\dots$

Ⓐ $\frac{37}{73}$ Ⓑ $1$ Ⓒ $\frac{3}{7}$ Ⓓ $\frac{7}{3}$





## complete

- $\dots\dots\dots\dots\dots\dots \times \frac{1}{2} = 1$
- if $\frac{5}{x} = \frac{15}{12}$ , then $2x = \dots\dots\dots$
- $\frac{6}{7} \div \frac{3}{14} = \dots\dots\dots\dots\dots\dots$
- $\frac{3}{5} \times \dots\dots\dots\dots\dots = \frac{6}{10}$



salahbought 3 kg of oranges he paid 36 L. E How much money does he pay 5 kg ?

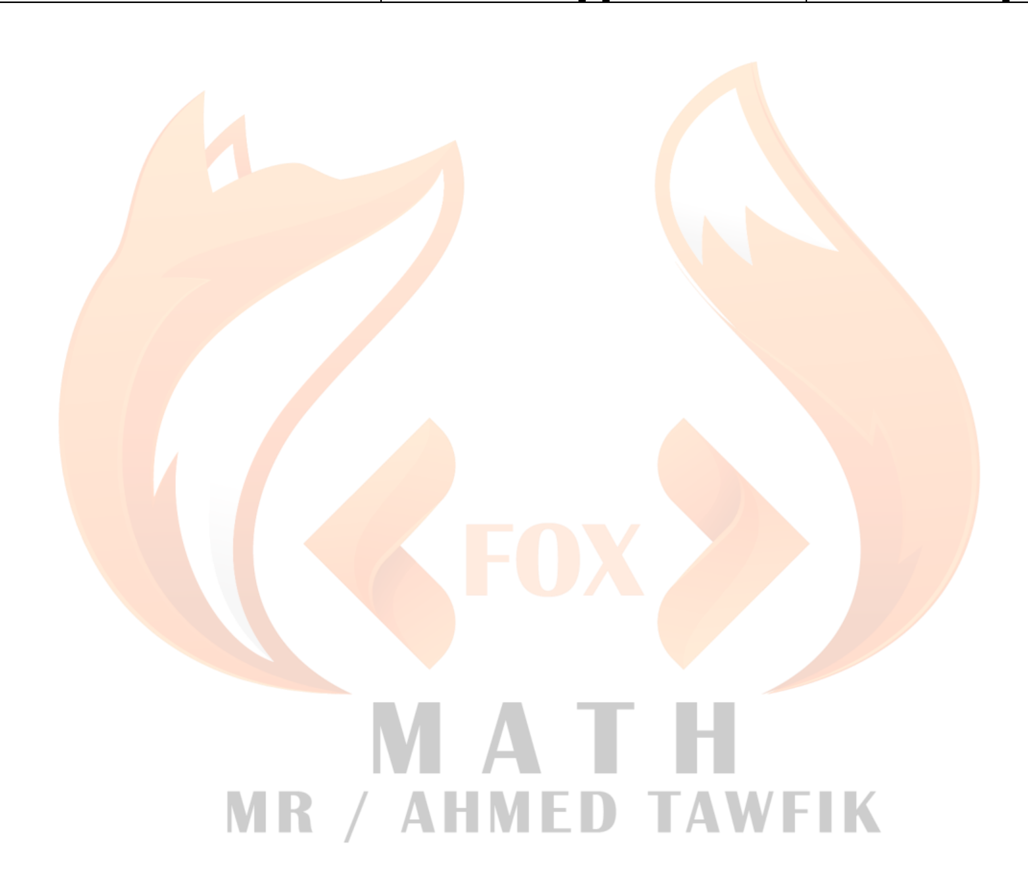
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the ratio between red marbles and blue marbles is 4 to 3 complete the following table

| Total marbles | Read marbles | blue marbles |
|---|---|---|
| [A] | 4 | 3 |
| 14 | 8 | [B] |
| 28 | [C] | [D] |






## Choose the correct answer



1. from the opposite figure :

$AC : FC = \cdots$ ... ... ... ..

A–B–C–D–E–F (equal segments)

Ⓐ $3 : 2$ Ⓑ $2 ; 3$ Ⓒ $2 : 4$ Ⓓ $3 : 4$

2. $\frac{3}{4} \div \frac{1}{2}$ ☐ $\frac{1}{2}$

Ⓐ $<$ Ⓑ $=$ Ⓒ $>$

3. $5.4 \times 0.02 = \cdots$ ... ... ... ... ..

Ⓐ 10.8 Ⓑ 1.08 Ⓒ 0.108 Ⓓ 0.0108

4. $\frac{4}{5} \div$ ... ... ... $= 1$

Ⓐ $\frac{4}{5}$ Ⓑ $\frac{5}{4}$ Ⓒ $1$ Ⓓ $0.4$

5. from the opposite model . $3 \div \frac{2}{3} = \cdots$ ... ... ... ... ...

Ⓐ $4\frac{1}{2}$ Ⓑ $4\frac{1}{3}$

Ⓒ $3\frac{1}{4}$ Ⓓ $3\frac{1}{2}$



6. $\frac{2}{3} \div \frac{1}{3}$ ☐ $\frac{1}{2}$

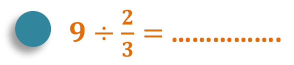
Ⓐ $<$ Ⓑ $=$ Ⓒ $>$

7. $\frac{7}{4} \div \frac{3}{4} = \cdots$ ... ... ... ..

Ⓐ $\frac{3}{7}$ Ⓑ $2\frac{1}{3}$ Ⓒ $\frac{4}{7}$ Ⓓ $\frac{4}{3}$



## Complete



- $9 \div \frac{2}{3} =$ ................
- $\frac{5}{6} \div$ ... ... ... $= 5$
- fifth of 25 is ..................
- Tthe first term in the ratio $4 : 7$ is ... ... ... ... ...
- ..........$\div \frac{1}{2} = \frac{4}{7}$



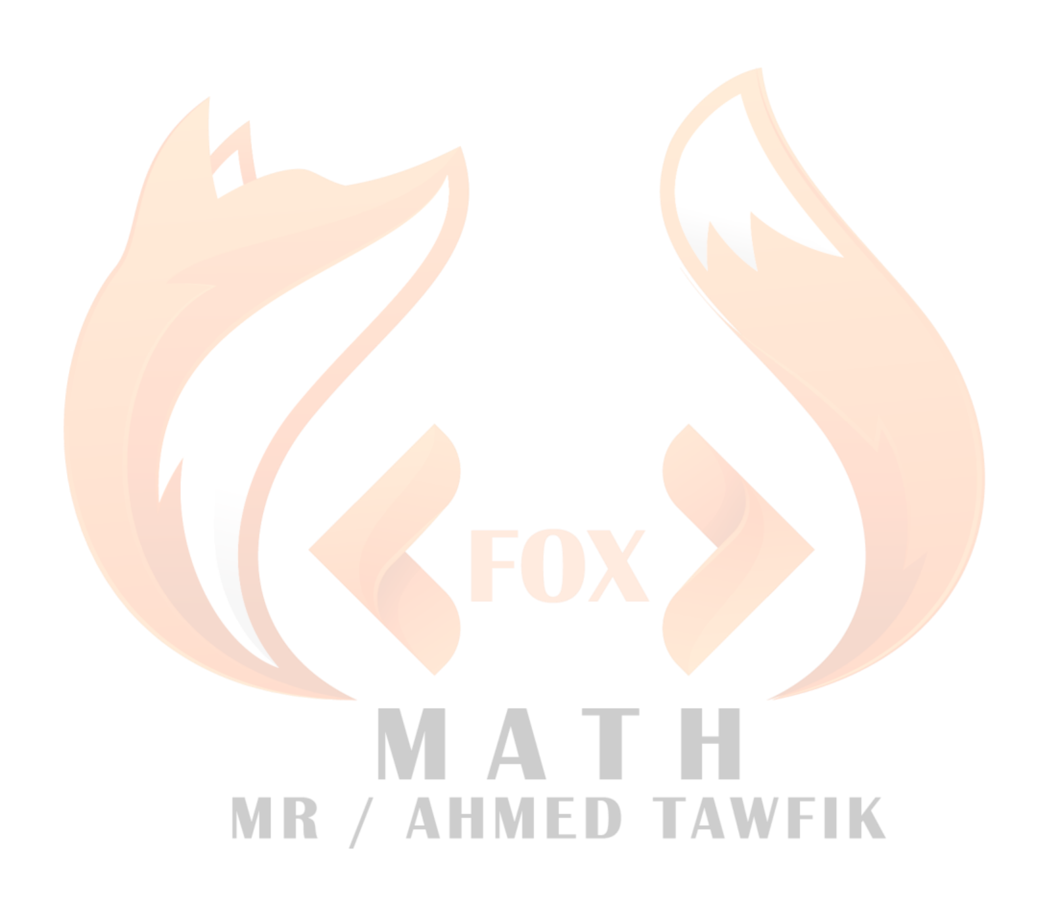

- use model to calculate $\frac{3}{4} \div 6$

.............................................................................................................................................................

- Mostafa has 15 liters of juice . He distributed them into small bottels of $\frac{3}{4}$ liter each
How many bottles did he use ?

.............................................................................................................................................

.............................................................................................................................................






## Choose the correct answer



1. $465.3 \div 0.25$ ☐ $4653 \div 2.5$

   $<$ $=$ $>$

2. the simplest form of $14 : 28$ is … … … … ….

   (A) 1to2 (B) $\frac{1}{7}$ (C) $4 : 8$ (D) $\frac{2}{1}$

3. if the ratio between a and b is $3 : 8$ . and b is 16 . then $a = \cdots$ … ….

   (A) 11 (B) 5 (C) 6 (D) 8

4. $34.25 \div 0.25 =$ ……… $\div$ 25

   (A) 34.25 (B) 342.5 (C) 3425 (D) 3.425

5. half of $\frac{4}{7}$ is … … … …

   (A) $\frac{4}{2}$ (B) $\frac{7}{2}$ (C) $\frac{4}{16}$ (D) $\frac{8}{7}$

6. how many $\frac{1}{8}$ 's are in $\frac{3}{4}$ ?

   (A) 3 (B) 4 (C) 6 (D) 8

## complete



- $\frac{2}{3}$ of $12 = \cdots$ … … … ..
- from the opposite model

  $\frac{2}{4} \div \frac{3}{8} = \cdots$ ..



| $\frac{1}{4}$ | | $\frac{1}{4}$ | | $\frac{1}{4}$ | | $\frac{1}{4}$ | |
|---|---|---|---|---|---|---|---|
| $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |

- $0.454 \times 0.1 = \cdots$ … … … … ..
- the rate is … … … … …
- the next ratio of $1 : 4$ , $2$ to $8$ , $\frac{4}{16}$ is … … … … ….



- find the ratio between what hany has and the total sum ofmoney in simplest form

  ………………………………………………………………………………………………………………

  ……………………………………………………………………

- find the value of x in each of the following

  $\frac{x-1}{5} = \frac{20}{25}$

  ………………………………………………………………………………………………………………

  $\frac{4}{7} = \frac{x+3}{28}$

  ………………………………………………………………………………………………………………



## Choose the correct answer



1. the product of any number by its reciprocal equals … ….

   (A) zero  (B) 1  (C) $\frac{3}{5}$  (D) $\frac{5}{3}$

2. the opposite tabe diagram shows the ratio between oranges and apples . if the difference between them is 4 , then the sum of numbers oranges and apples is … … … … ….

   ORANGES: ☐☐☐
   Apples: ☐☐

   4  8
   12  20

3. which the following ratios are equivalent ?

   (A) $\frac{2}{3}$ and $\frac{4}{9}$  (B) $\frac{12}{18}$ and $\frac{10}{15}$  (C) $\frac{3}{4}$ and $\frac{9}{10}$  (D) $\frac{5}{15}$ and $\frac{4}{10}$

4. if 4 to 9 is equivalent to $\frac{x}{36}$ , then $x = \cdots$ … … ..

   (A) 16  (B) 81  (C) 5  (D) 13

5. from the opposite model . $2 \div \frac{1}{2} = \cdots$ … … … ..

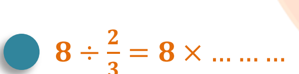
| 1 | | 1 | |
|---|---|---|---|
| $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ |

   (A) 4  (B) $\frac{1}{4}$  (C) $\frac{1}{2}$  (D) 2

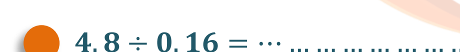
6. $4 \div \frac{2}{4} =$ …………..

   (A) $\frac{2}{4}$  (B) $\frac{4}{2}$  (C) 4  (D) 8

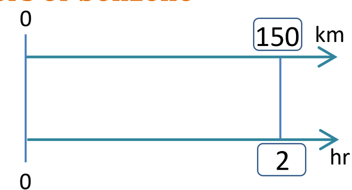
## Complete



- $8 \div \frac{2}{3} = 8 \times$ … … …



- $4.8 \div 0.16 = \cdots$ … … … … … … … … ….
- A car consumes 20 liters of benzene for 160 km , then its consumes 10 liters of benzene for … … … . . km
- from the opposite double number line , the unit rate is … … … … … ….






- $5 \div \frac{1}{3} = \cdots$ … … … … .$\times 3$

- Noha bought 7 books for 14. 25 L. E each . What is the price of these 7 books ?

  ……………………………………………………………………………………………………

- if the ratio between what sameh saved to what karim saved was 7 : 4 and the difference between them is 12 L. E find what each one save by using tap diagram

  ……………………………………………………………………………………………………




## Choose the correct answer



1. $5 \div \frac{2}{3} = 5 \times$ ... ... ... ..

   (A) $\frac{2}{3}$ (B) $\frac{3}{2}$ (C) $\frac{10}{3}$ (D) $2\frac{1}{3}$

2. the product of extremes ☐ the product of means .

   (A) < (B) = (C) > (D) ≠

3. $\frac{1}{4} \div \frac{1}{8}$ ☐ $\frac{2}{3}$ of 6

   (A) < (B) = (C) >

4. which of the following ratio is NOT equivalent to $\frac{36}{34}$?

   (A) $\frac{18}{12}$ (B) $\frac{9}{6}$ (C) $\frac{4}{8}$ (D) $\frac{6}{4}$

5. the simples form of the ratio 550 to 770 is ... ... ... ... ... ...

   (A) 5 : 7 (B) $\frac{55}{77}$ (C) 55 to70 (D) 7 to 5

6. the simplest form of the ratio 15 : 18 is .......................

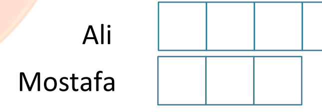
   (A) 5 : 8 (B) 1 : 1 (C) 5 : 6 (D) 8 : 5

## complete



- the model  represent ÷
- $3.8 \times 2.5 = \cdots$ ... ... ....
- the number of $\frac{2}{3}$ 's in6 is ... ... ...
- from the opposite tape diagram , the ratio between Mostafa and Ali = $\frac{.....}{.....}$






- ... ... ... .... $\times \frac{2}{7} = 1$



- if the price of 4 kilograms of cheese is 800 L. E
  find the price of 3 kilograms of the same cheese

  ..........................................................................................................................................

- if the ratio between number of boys and girls in a class is 4 : 5 and the number of boys 20 boys . Find the total pupils in the class by using tape diagram

  ..........................................................................................................................



## Choose the correct answer



1. $\dots\dots\dots\dots\dots \times \frac{3}{5} = \frac{6}{35}$

   (A) $\frac{2}{7}$ (B) $\frac{3}{30}$ (C) $\frac{18}{105}$ (D) $\frac{3}{7}$

2. the number of $\frac{4}{9}$ 'sin 8 is ……………

   (A) 36 (B) 18 (C) 9 (D) 4

3. the next ratio of 2 : 3 : 4 : 6 : 8 : 12 ……………

   (A) 12 : 16 (B) 16 to 24 (C) 10 : 14 (D) $\frac{12}{20}$

4. if 2 : 7 is equivalent to x : 14 , then x = ⋯ …………

   (A) 49 (B) 9 (C) 4 (D) 7

5. $\frac{3}{4} \times \dots\dots\dots\dots\dots = \frac{3}{2}$

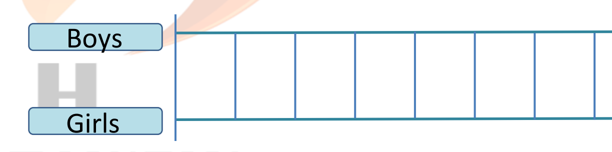
   (A) $\frac{1}{2}$ (B) $\frac{1}{4}$ (C) $\frac{4}{3}$ (D) 2

6. the reciprocal of 5 is ………………

   (A) 0 (B) 5 (C) $\frac{1}{5}$ (D) − 5

## complete

- $2.5 \times 1.4 = \cdots$ …………
- $\frac{5}{8} \div \frac{3}{4} =$………………
- if $10.35 \div 2.3 = 4.5$ , then $23 \times 4.5 =$ …………
- the simplest form of the ratio 12 to 20 is ………………………………
- $\frac{1}{5} \div 3 = \cdots$ ………
- if the ratio between number of boys and girls is 7 : 6 and the number of girls is 42 girls.
  Use the double number line to find :
  1 the number of boys 2 the total number of pupils




  ……………………………………………………………………………………
  ……………………………………………………………………………………

- noha uses $\frac{4}{9}$ cup of milk to make 2 mugs of coffee , so she uses ………… cup of milk to make one mug of coffee

  ……………………………………………………………………………………
  ……………………………………………………………………………………



## Choose the correct answer



1. $\ldots\ldots\ldots\ldots \times \frac{3}{8} = \frac{5}{6}$

Ⓐ $\frac{9}{20}$ Ⓑ $\frac{20}{9}$ Ⓒ $\frac{8}{16}$ Ⓓ $\frac{5}{16}$

2. $\frac{4}{7}$ of $21 = \cdots \ldots \ldots \ldots \ldots$

Ⓐ 4 Ⓑ 7 Ⓒ 14 Ⓓ 12

3. from the opposite tape diagram , if the sum of boys and girls is 35 , then each box equals … … … …

Boys

girls

Ⓐ 3 Ⓑ 2 Ⓒ 5 Ⓓ 7

4. which of the following is a unit rate ?

Ⓐ 35 L. E for 5 kg Ⓑ 60 km per 60 minutes

Ⓒ $\frac{1}{2}$ kg of flour per cake Ⓓ 140 L. E per 2 days

5. $0.2 \times 0.5 = \cdots \ldots \ldots$

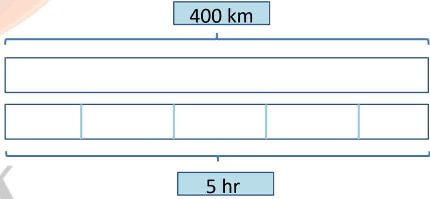
Ⓐ 0. 10 Ⓑ 0. 01 Ⓒ 1 Ⓓ 1. 10

6. if the ratio x : 3 is equivalent to 10 : 15 , then $x + 2 = \cdots \ldots \ldots$

Ⓐ 2 Ⓑ 4 Ⓒ 6 Ⓓ 10

## Complete

- if $\frac{3}{4} = \frac{12}{x}$ , then $x + 4 = \cdots \ldots \ldots$
- $\frac{1}{7} \div 2 =$……….
- $7.45 \div 0.01 =$ ………….
- $2.5 \times 3.4 = 25 \times \ldots \ldots \ldots \ldots$
- from the opposite tape diagram , the unit rate is … … … … ..




- soha divided 127. 5 L. E among her three sons find the share of each one

……………………………………………………………………………………………………

- A runner covered $\frac{4}{5}$ kilometer in 2 laps how many kilo meters did he run in one lap ?

……………………………………………………………………………………………………





## Choose the correct answer

1. $\frac{1}{4} \div \frac{1}{2}$ ☐ $\frac{1}{8}$

   Ⓐ $<$ Ⓑ $=$ Ⓒ $>$

2. if the ratio between between oranges and bananas is $2:5$
   and the number of oranges is 10 , then the difference between them is … …

   Ⓐ 5 Ⓑ 15 Ⓒ 25 Ⓓ 35

3. … … … … … … $\div \frac{2}{7} = 3$

   Ⓐ $\frac{21}{2}$ Ⓑ $\frac{7}{6}$ Ⓒ $\frac{7}{2}$ Ⓓ $\frac{6}{7}$

4. the missing number in the opposite double number line is … … …

| | 0 | 2 | 4 | 6 |
|---|---|---|---|---|
| Time | 0 | 2 | 4 | 6 |
| distance | 0 | 7 | ….. | 21 |

   Ⓐ 9 Ⓑ 14
   Ⓒ 17 Ⓓ 11

5. $\frac{3}{5} \div 3$ ☐ $\frac{1}{5}$

   Ⓐ $<$ Ⓑ $=$ Ⓒ $>$

6. which of the following comparisaons is showing a ratio ?

   Ⓐ six children like swimming than volleyball

   Ⓑ three more children like volley ball than swimming

   Ⓒ fewer children like swimming than volleyball

   Ⓓ for every six children like volleyball , three children like swimming



## complete

- if ratio $\frac{7}{8}$ is equivalent to $14 : x$ then $x - 2 = \cdots$ … …
- the number of $\frac{2}{5}$'s in 2 is
- … … … … . $\div \frac{2}{7} = \frac{1}{2}$
- $100 : 150 = \cdots$ … … … … : … … … … … . . [ in the simplest form ]
- if the ratio $\frac{4}{9}$ is equivalent to $\frac{12}{x-1}$ , then $x = \cdots$ … … ….





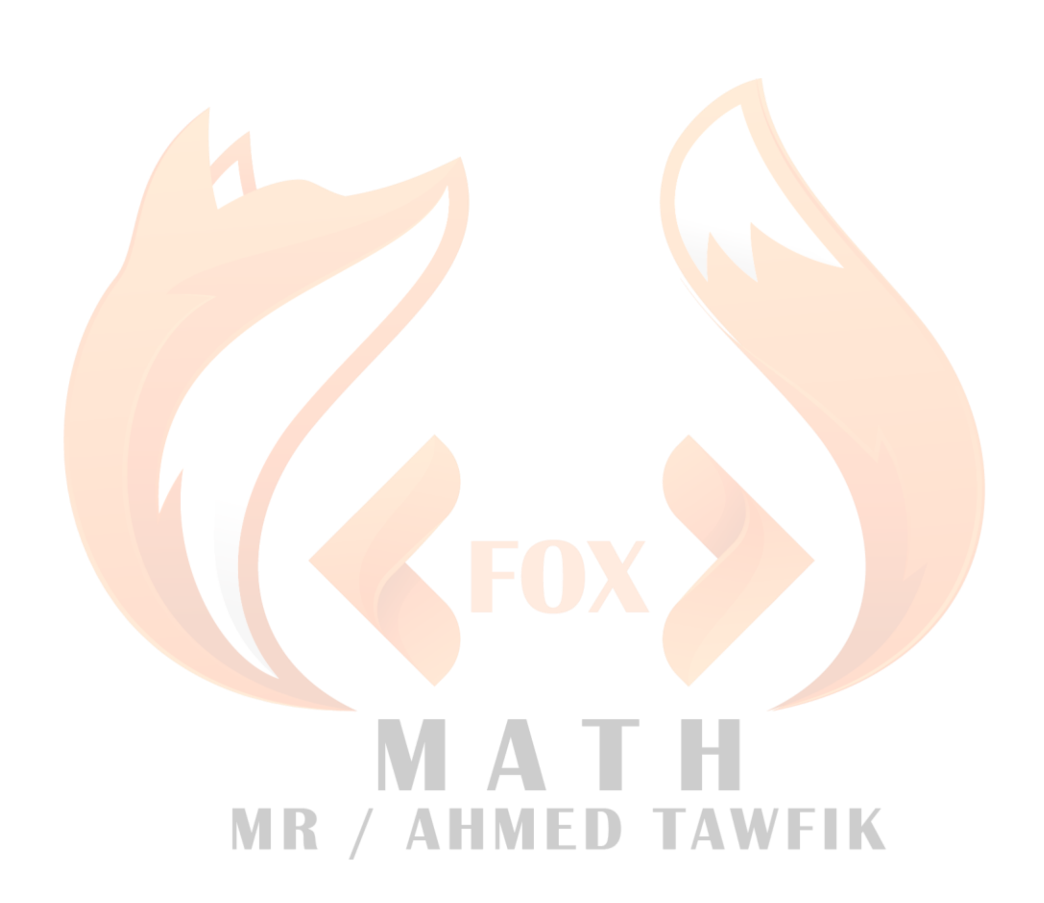
sameh has 6 liters of milk he needs to divide them into small bottles of $\frac{3}{4}$ liter each

How many bottles does he need?

........................................................................................................................................................

if the price of one meter of cloth is 25.4L.E find the price of 2.5 meters .

........................................................................................................................................................






## Choose the correct answer



1. if $\frac{5}{7} = \frac{x}{28}$ , then $x = \cdots$ ... ... ... ... ....

Ⓐ 4 Ⓑ 20 Ⓒ 9 Ⓓ 26

2. from the opposite equivalent ratios , $x + y = \cdots$ ... ... ... ....

Ⓐ 20 Ⓑ 35 Ⓒ 26 Ⓓ 14

3. if 30 L. E for 6 kg , then the cost of 30 kg is ... ... ... ... . . L. E

Ⓐ 6 Ⓑ 150 Ⓒ 24 Ⓓ 120

4. $332.2 \div 0.11 = \cdots$ ... ... ... ...

Ⓐ 320 Ⓑ 302 Ⓒ 3020 Ⓓ 3.02

5. if $34 \times 78 = 2,652$ , then $26.52 \div 3.1 = \cdots$ ... ... ... ...

Ⓐ 78 Ⓑ 0.78 Ⓒ 7.8 Ⓓ 8.7

## Complete

- $3.25 \div 0.025 = \cdots$ ... ... ... ... ... ... . . $\div 25$
- the ratio between two numbers is 4 : 5 and the greater number is 20 , then the smaller number is ... ... ... ... ... ... ...
- the number ... ... ... ... . . has no reciprocal
- The reciprocal of $\frac{3}{5}$ is ... ... ... ...
- The first term in the ratio 25 : 49 is ... ... ... ... ..
- the simplest form of the ratio 20 to 25 is ... ....
- find the value of m in each of the following

$$\frac{3}{4} \times m = \frac{3}{8}$$

.............................................................................................................................................

$$\frac{3}{4} \div m = \frac{3}{8}$$

.............................................................................................................................................

- a box of table tennis balls weighs $\frac{10}{18}$ of a kg if each ball weighs $\frac{5}{27}$ of a kg

then how many balls are there in the box ?